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October 22, 2004

**Via Federal Express**

Ms. Elizabeth O'Donnell  
Executive Director  
Public Service Commission  
211 Sower Boulevard, P.O. Box 615  
Frankfort, Kentucky 40602-0615

**RECEIVED**

OCT 25 2004

**PUBLIC SERVICE  
COMMISSION**

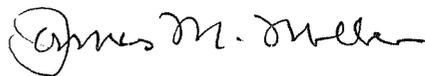
Re: In the matter of: The Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity to Construct a 161 kV Transmission Line in Breckinridge and Meade Counties, Kentucky, PSC Case No. 2004-365

Dear Ms. O'Donnell:

Enclosed for filing, on behalf of Big Rivers Electric Corporation ("Big Rivers"), are an original and six copies of its application for a certificate of public convenience and necessity to construct a 161 kV transmission line. Big Rivers is also filing, contemporaneously with this application, but under separate pleadings and separate cover letters, (1) a copy of each letter sent to a property owner whose property the proposed transmission line will cross and (2) three copies of maps showing the route for the proposed transmission line.

Please return a file-stamped copy of the application and of each pleading accompanying the letters and the maps. An extra copy of the application and each pleading is enclosed for this purpose.

Sincerely yours,



James M. Miller

JMM/ej  
Enclosures

cc: David A. Spainhowerd

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COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

**RECEIVED**

OCT 25 2004

PUBLIC SERVICE  
COMMISSION

In the matter of: )  
)  
The Application of Big Rivers Electric Corporation ) Case No. 2004-00365  
for a Certificate of Public Convenience and )  
Necessity to Construct a 161 kV Transmission Line )  
in Breckinridge and Meade Counties, Kentucky )

**APPLICATION**

Big Rivers Electric Corporation (“Big Rivers”) files this application (“Application”) pursuant to 807 KAR 5:120E Section 2, seeking a certificate of public convenience and necessity to construct a 161 kilovolt (“kV”) transmission line that is more than one mile in length. In support of this Application, Big Rivers states as follows:

1. The applicant, Big Rivers, is a rural electric cooperative corporation organized pursuant to KRS Chapter 279. Its mailing address is P.O. Box 24, 201 Third Street, Henderson, Kentucky 42420. 807 KAR 5:120E Section 2(1)(a); 807 KAR 5:001 Section 8(1).
2. Big Rivers owns generating assets, and purchases, transmits and sells electricity at wholesale. Its principal purpose is to provide the wholesale electricity requirements of its three distribution cooperative members: Kenergy Corp., Meade County Rural Electric Cooperative Corporation (“Meade County RECC”), and Jackson Purchase Energy Corp. The distribution cooperatives in turn provide retail electric service to approximately 101,000 consumer/members located in 22 Western Kentucky counties: Ballard, Breckinridge, Caldwell, Carlisle, Crittenden, Daviess, Graves, Grayson, Hancock, Hardin, Henderson, Hopkins, Livingston, Lyon, Marshall, McCracken, McLean, Meade, Muhlenberg, Ohio, Union and Webster.
3. The articles of incorporation of Big Rivers are attached as Exhibit 1 to the Application of Big

Rivers in *In the Matter of: The Application of Big Rivers Electric Corporation, Louisville Gas and Electric Company, Western Kentucky Energy Corp., Western Kentucky Leasing Corp., and LG&E Station Two Inc. for Approval of Wholesale Rate Adjustment for Big Rivers Electric Corporation and for Approval of Transaction*, PSC Case No. 97-204. 807 KAR 5:120E Section 2(1)(a); 807 K.A.R. 5:001 Section 8(3).

4. Big Rivers is seeking a certificate of public convenience and necessity to construct a 161 kV transmission line that is approximately 17.3 miles in length. Construction of any electric transmission line of one hundred thirty-eight (138) kilovolts or more and of more than five thousand two hundred eighty (5,280) feet in length requires a certificate of public convenience and necessity. The authority of the Public Service Commission (“Commission” or “PSC”) to grant this certificate is found in KRS 278.020. 807 KAR 5:120E Section 2(1)(a); 807 K.A.R. 5:001 Section 8(1).

5. Big Rivers filed its notice of intent to file this application with the Commission on September 20, 2004. A copy of that notice is attached hereto as Exhibit A. 807 KAR 5:120E Section 1.

6. The proposed line will be located in Breckinridge and Meade Counties, Kentucky. The line begins at a tap point in an existing line located approximately 3 miles west of Hardinsburg in central Breckenridge County and extends in a general northeasterly direction a distance of 17.3 miles to an existing Big Rivers substation located northeast of Irvington in southwestern Meade County. The line will serve as a second 161 kV power supply source to that substation, and will backup the existing line that currently serves the substation. The typical facilities used in the project will be single steel pole structures with some two-pole structures used to accommodate very long spans from

hilltop to hilltop along the proposed route. The construction is scheduled for completion during 2005. 807 KAR 5:120E Section 2(1)(b); 807 KAR 5:001 Section 9(2)(c).

7. Big Rivers began the design of the route with a general route, which was a relatively straight line from the starting point at an existing Big Rivers transmission line to the ending point at the Meade County substation. The final route was determined by contacting property owners, conducting field surveys, and adjusting the general route as appropriate, consistent with sound engineering principles. This process allowed the line to be designed to mitigate impacts to existing property improvements, developments, and known uses of the land. As such, the route for the proposed line is Big Rivers' best effort to provide the much-needed backup line while minimizing the negative impacts of the project.

8. The construction will be financed by force account from Big Rivers' working capital. The total cost of the project is estimated to be approximately \$3.3 million. The estimated cost of operation of the new construction, including the cost of insurance, taxes, and operation and maintenance ("O&M"), based on historical averages, is 2.97% of gross investment per year, or approximately \$98,000 per year. The project does not involve sufficient capital outlay to materially affect the existing financial condition of Big Rivers. 807 KAR 5:120E Sections 2(1)(b), (9); 807 KAR 5:001 Sections 9(2)(e)-(f).

9. The proposed line will not compete with any public utilities, corporations, or persons. 807 KAR 5:120E Section 2(1)(b); 807 KAR 5:001 Section 9(2)(c).

10. No franchises or permits were required for the proposed new construction. 807 KAR 5:120E

Section 2(1)(b); 807 KAR 5:001 Section 9(2)(b).

11. The only written assessment of the environmental, historical, and archeological impacts of the proposed construction that was required by an administrative agency was an environmental assessment, a copy of which is attached hereto as Exhibit B. 807 KAR 5:120E Section 2(8).

12. Three (3) maps showing the route for the proposed project and affected property boundaries have been filed concurrently with this Application in a separate pleading. 807 KAR 5:120E Section 2(2).

13. Each property owner whose property the transmission line is proposed to cross has been notified of this proceeding by certified mail, return receipt requested, as required by 807 KAR 5:120E Section 2(3). Each notice gave the commission docket number under which the application will be processed, a map showing the proposed location, the address and telephone number of the executive director of the Commission, and a description, including the proposed scope, of the project. The notices also informed each property owner of his or her rights to request a local public hearing and to move to intervene in the case. A copy of each letter has been filed concurrently with this Application in a separate pleading. 807 KAR 5:120E Sections 2(3)-(4).

14. A notice of the intent to construct the proposed transmission line was published on October 13, 2004, in the *Meade County Messenger*, a newspaper of general circulation in Meade County, Kentucky, and in the *Breckinridge County Herald News*, a newspaper of general circulation in Breckinridge County, Kentucky. Each notice contained a map showing the proposed route, a statement of the right to request a local public hearing, and a statement of the right to move to

intervene. A copy of each notice and an affidavit of publication from each newspaper are attached hereto as Exhibit C. 807 KAR 5:120E Sections 2(5)-(6).

15. No public meetings have been held with persons who own property over which the line is proposed to be constructed. 807 KAR 5:120E Section 2(7).

16. The proposed line is required by public convenience and necessity. As noted above, the proposed line will serve as a second power supply source for the Big Rivers Meade County substation. The Meade County substation serves seven Meade County RECC distribution substations, which in turn serve approximately 9,800 retail customers. These retail customers experienced outages as a result of the loss of the existing 161 kV line during storms in July of this year. The backup power supply source will significantly reduce the likelihood of future storm-related outages, and will improve the response time to restore service in the event of such an outage.

Additionally, Big Rivers has performed studies that support the need for the proposed transmission line. As discussed below, the studies performed show that unacceptable system conditions will occur during outages of the existing line serving the Meade County substation, and that a system improvement in the Meade County area is warranted. The proposed line solves the need for a system improvement.

The need for a system improvement was first identified in a 2000-2002 Construction Work

Plan (“CWP”)<sup>1</sup> and was also identified in a 2003-2005 CWP.<sup>2</sup> As part of the CWP process, and in order to evaluate the vulnerability in the Meade County area, power flow studies were completed with various on and off peak load levels (94.6 MW, 89 MW, 82 MW, 56 MW, and 34 MW). As with other planning studies, alternative switching was the first option studied to alleviate the system problems. The most effective switching alternative includes closing the Andyville switch to Union Star and the Custer switch to Flaherty. Along with the existing Irvington loop, this switching results in three 69 kV loops from New Hardinsburg to Meade County. All five load levels were evaluated with and without this switching scenario.

Acceptable system conditions were seen with both the 34 MW and 56 MW load levels. Unacceptable system conditions were seen at the 89 MW and 94.6 MW load levels (with and without switching). At the 82 MW load level, with an outage of the existing 161 kV line (prior to system switching), the New Hardinsburg transformer loading was 97%, the Irvington line loading was 158%, and voltages were as low as 85% (9 stations were below the accepted 0.917 P.U. voltage level). Switching reduced the New Hardinsburg transformer loading to 93%, reduced the Irvington line loading to 90%, and increased the voltages to acceptable levels. While these conditions are acceptable, the 90+% loadings would be 100% loadings with an additional 3 or 4 MW of growth.

Studies showed that system conditions could be acceptable during an outage of the New

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<sup>1</sup> The Meade County coincident peak load was modeled as 88 MW in studies completed as part of the 200-2002 CWP.

<sup>2</sup> The Meade County coincident peak load was modeled as 94.6 MW in studies completed as part of the 2003-2005 CWP. This load level was derived from the 2001 Meade County load forecast with a Big Rivers coincidence factor applied. This factor reduced the load from the forecasted 97.9 MW to 94.6 MW.

Hardinsburg to Meade County 161 kV line with Meade County RECC load levels nearing 86 MW. However, due to the inherent uncertainties of study results and weather conditions, the outage would be cause for concern with lower load levels. Any routine maintenance that requires the outage of the New Hardinsburg to Meade County 161 kV circuit could not be performed with an 80+ MW load level.

Twelve months of actual load data<sup>3</sup> was uniformly ratioed to an expected 2005 load level in order to simulate Meade County load levels expected in 2005. The expected peak load was forecasted to be 94.6 MW. A review of this 2005 load forecast showed that the Meade County load is expected to exceed 82 MW for at least 139 hours. This analysis was completed by reviewing monthly reports that show only the 20 highest hours of each month. In six of the months reviewed, all 20 of the adjusted load levels shown exceeded the 82 MW level. If additional periods were reviewed, the total hours in which the Meade County load exceeds 82 MW would be considerably higher.

Thus, at the load levels projected for the summer of 2005, an overload of the New Hardinsburg 161/69 kV transformers and the Irvington 69 kV circuit could be expected with an outage of the existing line that serves the Meade County substation (prior to system switching). In addition, wide-spread low voltages at Meade County RECC delivery points are expected. System

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<sup>3</sup> A review of 12 months of load in 2001 and 2002 showed the Meade County loads at or above 82 MW for at least 43.5 hours during five separate months. Peak loads exceeded 80 MW in six of the 12 months. The actual Meade County summer peak load for 1999 was 82.7 MW; for 2000, it was 83.9 MW; for 2001, it was 82.0 MW (88.4 MW winter peak); for 2002, it was 87.3 MW; and for 2003, it was 84.9 MW (100.5 MW winter peak).

reconfiguration through switching will not restore the system to acceptable conditions. In addition, the system conditions expected with an outage of the existing 161 kV line, but prior to switching, could be considered severe.

As a result of the above findings, multiple improvement options were evaluated as part of the CWP process and through separate studies. The alternatives that were considered are summarized below. After a review of all the alternatives considered, the construction of the proposed 161 kV line (option A below) was found to be the most economical alternative that effectively dealt with the needs revealed in the CWP process. The alternatives studied were:

A. *New 161 kV line from the Skillman to New Hardinsburg line to the Meade County Substation (the proposed line):* The proposed line would run from New Hardinsburg to Skillman and was selected as the most economical and robust alternative. This line would be operated normally open at New Hardinsburg thereby creating a Skillman to Meade County to New Hardinsburg loop. This option provides an uninterrupted backup service for the Meade County substation, and no switching is required to maintain acceptable service during an outage of the New Hardinsburg to Meade County 161 kV circuit.

B. *3 Mile 138 kV LG&E Interconnection with LG&E System Upgrades:* This was originally selected as the preferred option in the 2000-2002 CWP. This alternative provides uninterrupted backup service for an outage of the existing 161 kV line with no switching required to maintain acceptable service. However, this option was eliminated due to LG&E concerns regarding system limitations.

LG&E representatives indicated that system improvements would be required due to LG&E system limitations in the proposed interconnection area. At a minimum, the required improvements would include the re-conductoring of approximately 28 miles of 138 kV transmission lines in the LG&E system between Mill Creek and the proposed interconnection. LG&E also indicated that due to system constraints, terminating the proposed circuit at Mill Creek, rather than the proposed tap point, might be necessary. This would result in the construction of approximately 30 miles of new 138 kV transmission lines.

C. *New Hardinsburg Substation Transformer Expansion:* If completed immediately, this improvement plan would allow the proposed backup line to be delayed until approximately 2008. Re-conductoring the 10.6 mile 69 kV Irvington line and a Hardinsburg to Fordsville 69 kV line upgrade would also be required as part of this plan. Due to low system voltages expected prior to system switching, this option does not provide the same level of service reliability as the proposed construction. In addition, the need for a second high voltage source at Meade County is only delayed with this option.

D. *New 69 kV interconnection with Hoosier Energy (Battletown to Mauckport):* All of the construction included in the above-described New Hardinsburg Substation expansion alternative would also be required with this option, although the timing of the necessary construction would vary. Drawbacks with this option include the low voltages expected prior to system switching and the cost of constructing a new interconnection that includes a crossing of the Ohio River.

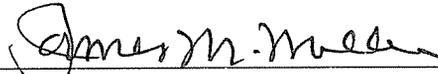
E. *Meade County Generation Addition:* Power flow studies were completed to

determine the minimum amount of generation that could be installed at Meade County in order to maintain acceptable system conditions during an outage of the existing 161 kV source. The studies showed that 15 MW to 20 MW of generation would be required to eliminate the need for other system improvements. However, quick-start generation at an unmanned site may not provide the reliability offered by the other system facility additions. The initial system conditions expected immediately after an outage of the existing 161 kV line would also be a concern.

In conclusion, the proposed transmission line is a reasonable solution, not an unreasonable duplication of services; and it is a necessary backup 161 kV power supply source that will offer increased service reliability and will provide a significant benefit to Big Rivers' system and to Meade County RECC and its retail customers. The need for a system improvement to ensure future reliability of Big Rivers' system is clear. Big Rivers' thoroughly studied available options and concluded that construction of the proposed line was the most economical alternative that would resolve the needs revealed in the CWP process. Moreover, Big Rivers designed the proposed line so that impacts on property owners would be minimized. For the foregoing reasons, the proposed transmission line is required by public convenience and necessity. 807 KAR 5:120E Section 2(1)(b); 807 KAR 5:001 Section 9(2)(a).

WHEREFORE, Big Rivers requests that the Commission issue an order granting Big Rivers a certificate of public convenience and necessity for the construction of a 161 kV transmission line in Meade and Breckinridge Counties, and for all other relief to which it may be entitled.

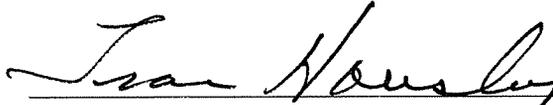
SULLIVAN, MOUNTJOY, STAINBACK  
& MILLER, P.S.C.



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Owensboro, Kentucky 42302-0727  
(270) 926-4000  
Counsel for Big Rivers Electric Corporation

**Verification**

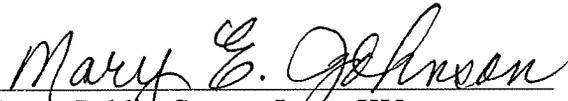
I, Travis Housley, Vice President, System Operations for Big Rivers Electric Corporation, hereby state that I have read the foregoing Application and that the statements contained therein are true and correct to the best of my knowledge and belief, on this the 22<sup>nd</sup> day of October, 2004.



Travis Housley  
Vice President, System Operations  
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY     )  
COUNTY OF HENDERSON         )

SUBSCRIBED AND SWORN to before me by Travis Housley, as Vice President, System Operations for Big Rivers Electric Corporation, on this the 22<sup>nd</sup> day of October, 2004.



Notary Public, State at Large KY  
My commission expires: 4/29/07

**EXHIBIT A**

**Notice of Intent to File Application**

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of: )  
)  
The Application of Big Rivers Electric Corporation ) Case No. \_\_\_\_\_  
for a Certificate of Public Convenience and )  
Necessity to Construct a 161 kV Transmission Line )  
in Breckinridge and Meade Counties, Kentucky )

**NOTICE OF INTENT TO FILE APPLICATION**

Big Rivers Electric Corporation ("Big Rivers"), pursuant to 807 K.A.R. 5:120E § 1, respectfully submits this notice of its intent to file an application for a certificate of public convenience and necessity to construct a 161 kV transmission line in Breckinridge and Meade Counties, Kentucky.

(a) Name of Applicant:

Big Rivers Electric Corporation  
201 Third Street  
P.O. Box 24  
Henderson, Kentucky 42419-0024  
(270) 827-2561

(b) Description of Proposed Construction

The proposed project is a 17.3 mile 161 kV transmission line in Breckinridge and Meade Counties, Kentucky. The route for the proposed line begins at a tap point in an existing line located approximately 3 miles west of Hardinsburg in central Breckinridge County and extends in a general northeasterly direction to end in an existing Big Rivers substation located northeast of Irvington in southwestern Meade County. The line will serve as a second 161 kV source to this substation and will backup the existing line currently providing that service. The line will thus offer increased service reliability for the seven

Meade County Rural Electric Cooperative Corporation distribution stations served from the Meade County substation and will avoid outages resulting from the loss of the existing 161 kV line source during storms similar to those experienced in July of this year.

The typical construction will be single steel pole structures with some two-pole structures used to accommodate very long spans from hilltop to hilltop along the proposed route. The construction is scheduled for completion in 2005, with the total cost estimated to be approximately \$3.3 million.

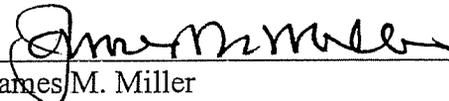
An alternate route using the same beginning and ending points as the proposed route, but otherwise representing more of a straight line between the two ends was considered. A map showing the route for the proposed transmission line and the alternate route that was considered is attached hereto as Exhibit A.

(c) Name of County or Counties in which the construction will be proposed

The proposed transmission line will be located entirely within Breckinridge and Meade Counties, Kentucky.

This 17<sup>th</sup> day of September, 2004.

SULLIVAN, MOUNTJOY, STAINBACK  
& MILLER, P.S.C.



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Attorneys for Big Rivers Electric Corporation

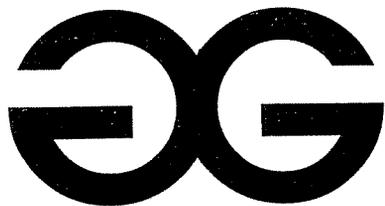
**EXHIBIT B**

**Environmental Assessment**

**BIG RIVERS  
ELECTRIC CORPORATION**

**(Kentucky 62 Big Rivers)**

**ENVIRONMENTAL REPORT  
FOR THE PROPOSED SKILLMAN TO  
MEADE COUNTY ELECTRIC TIE LINE**



**GILPIN GROUP**

Environmental Consulting and Planning

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## 1.0 SCOPE

Big River Electric Corporation (Big Rivers) is a non-profit electric transmission cooperative headquartered in Henderson, Kentucky that provides electric power to three electric distribution cooperatives located in the western portion of the State of Kentucky. Big Rivers is requesting approval from the United States Department of Agriculture, Rural Utilities Service (RUS) for the construction of a proposed electric transmission tie line in Breckinridge and Meade Counties, Kentucky. The construction of the proposed transmission line requires the preparation of an Environmental Report in accordance with the RUS's "*Environmental Policies and Procedures*," 7CFR Part 1794.

The following is a detailed description of the proposed electric transmission tie line and copies of portions of USGS topographic maps locating the proposed facility, along with a discussion of the need and alternatives considered for the proposed project. A discussion of the existing environment within the project area, the environmental impact of constructing the proposed project, and the mitigation of potential environmental impacts is also included.

## 2.0 PROJECT DESCRIPTION

Big Rivers is proposing to construct a new 17 mile 161 kilovolt (kV) electric transmission tie line that would tap an existing transmission line located approximately three miles west of the incorporated community of Hardinsburg in central Breckinridge County, Kentucky. The proposed route for the new line would extend in a general northeasterly direction from the tap point to an existing electric substation located in eastern Meade County, Kentucky, near the western corner of the intersection of State Routes 428 and 448 (79), northeast of the incorporated community of Irvington (See PROJECT MAPS 1 - 5,

Appendix A). The proposed right-of-way (ROW) width for the new electric line would be 125 feet. The electrical conductors would be mostly supported by single steel pole structures that would be approximately 75 to 90 feet in height above the ground. However, a few two-pole H-frame steel structures with an average height of approximately 95 feet would be used to accommodate some very long spans from hilltop to hilltop along the proposed route.

### **3.0 NEED**

Big Rivers is proposing to construct the Skillman to Meade County Tie Line to serve as an alternate electrical feed to Meade County Rural Electric Cooperative Corporation's (MCRECC's) existing electric substation in the event of an emergency episode. The existing substation is currently provided electric power through a single existing radial 161 kV transmission line. Should an outage occur on this line there currently is no way to supply the existing substation electric power through an alternate source. The proposed transmission line would provide the existing substation a second transmission line that could be utilized as an alternate feed to supply the substation electric power in the event of an outage on the existing line. The proposed transmission line would also aid in more evenly allocating the electrical load on the transmission system providing MCRECC's electric distribution system with electric power.

### **4.0 ALTERNATIVES**

*"No action"* was considered by Big Rivers as an alternative to the proposed project described in this document. Choosing this alternative would involve maintaining the status quo and not constructing the project, as proposed. Should the proposed electric line not be

constructed, Big Rivers would not be able to provide an alternate electric feed to MCRECC's existing electric substation (See Section "3.0 NEED"). This would result in Big Rivers not being able to provide the existing substation with electric power during an outage on the existing electric line currently supplying the substation with electric power. Choosing the "no action" alternative would also result in Big Rivers not being able to improve the service reliability of the existing substation. This is a situation that would be unacceptable to Big Rivers' and MCRECC's staffs, the Board of Directors of these two electric cooperatives and the consumers located in the project area. Therefore, Big Rivers determined that the "no action" alternative was not a viable alternative to the proposed project.

Big Rivers did not investigate alternate routes for the proposed new tie line. The proposed route for the planned new electric transmission line is a fairly direct route extending between the tap point on the existing transmission line and the existing substation site. Consequently, any other alternate routes extending between the tap point and the existing substation site would be longer in length than the proposed route making the transmission line more expensive to construct. The proposed route does incorporate small adjustments to avoid some development in the project area and to follow some property boundaries to mitigate potential existing land use impacts. Big Rivers also did not investigate energy conservation as an alternative to the proposed project because energy conservation cannot provide an alternate electric feed to an existing substation.

## **5.0 EXISTING ENVIRONMENT**

The proposed route for the planned new electric transmission tie line is located extending through rural areas of Breckinridge and Meade Counties, Kentucky. The proposed

route is composed mostly of agricultural land, the majority of which is used for pastureland. Approximately one third of the proposed route is wooded consisting of deciduous trees. Some residential development is also scattered throughout the area and the proposed route passes within one to two miles of the incorporated communities of Hardinsburg and Irvington. The topography of the project area along the mid section of the proposed route is composed of steeply sloping hills and valleys, and the topography along the eastern and western portions of the proposed route is more moderately sloping (See PROJECT MAPS, Appendix A). All the land that would be affected by the proposed electric transmission line project is privately owned.

## **6.0 ENVIRONMENTAL IMPACT & MITIGATION**

### ***6.1 WATER QUALITY***

The proposed ROW for the planned new electric transmission tie line traverses Hardins, Dorridge and Sinking Creeks, along with a few smaller unnamed streams. As a result, there is a potential for water quality degradation of the surface water in the project area due to the proposed construction activity and the erosion of soils in association with water runoff from the construction sites. To aid in protecting the water quality of the project area Big Rivers would not initiate required land clearing activities until absolutely necessary to reduce the amount of time bare soils are exposed to wind and water erosion. Big Rivers would also utilize staked straw bales and/or siltation fence at any areas of soil disturbance adjacent to the creeks and streams to aid in preventing eroded soils from entering the streams. Any areas of soil disturbance caused by the proposed construction activity would also be temporary, lasting only through the construction phase of the project, and all disturbed areas

would be stabilized and revegetated, as soon as practicable once construction is completed. Additionally, any vegetation that requires removal from the proposed ROW would be cut in a manner to leave the roots intact and to aid in holding the soil in place. Due to the implementation of these mitigative measures, the proposed project would not have any adverse impacts on the water quality or aquatic resources of the project area.

There are no rivers or streams located within the project area that are recognized as National, or Wild and Scenic Rivers. As a result, no rivers or streams so designated would be affected by the proposed project.

## **6.2 FLOOD PRONE AREAS**

The proposed route for the new electric transmission tie line was reviewed in relation to a *Flood Hazard Boundary Map* (FHBM) secured from the Federal Emergency Management Agency to determine whether the proposed project will affect any important flood prone areas. The review of the FHBM revealed that the proposed route traverses a 100-year floodplain associated with Sinking Creek (Community Panel No. 210025 0004 A). There are no practicable alternatives to the proposed tie line crossing this floodplain area should it be constructed. The tie line is located generally perpendicular to the creek and the floodplain extends along the creek in the vicinity of the proposed project. Consequently, attempting to avoid the floodplain area by trying to route around it would add unreasonably to the length and construction costs of the line, making the line economically prohibitive to construct. However, the proposed transmission line would not have any effects on the floodplain. The floodplain area at the proposed crossing is between 200 and 300 feet in width and the proposed line would be able to span the floodplain, thereby avoiding the placement of support structures in the floodplain area.

### **6.3 WETLANDS**

The proposed route for the new tie line was compared to *National Wetland Inventory Maps* developed by the U.S. Fish and Wildlife Service to determine whether any important wetland areas would be affected by the proposed project. This comparison revealed that the proposed line would traverse riverine unconsolidated bottom wetlands associated with Sinking Creek, Hardins Creek and Dorridge Creek; palustrine forested wetlands associated with three unnamed tributaries of Hardins Creek; and a few small isolated palustrine unconsolidated bottom wetlands. Like the floodplain area discussed above, there are no practicable alternatives to the proposed line traversing the wetland areas associated with the creeks should the line be constructed. The identified wetland areas are located all along the creeks through the project area and trying to route around the wetlands would add unreasonably to the length and costs of the line. There are also no practicable alternatives to traversing the few small isolated palustrine unconsolidated wetlands due to the large number of these types of wetlands in the project area. The affect the new line would have on the wetlands would be minimal. The wetland areas are all located in low-lying areas and the wetlands associated with the creeks are located in the immediate vicinity of the creeks. As a result, the transmission tie line would be able to span the wetland areas, thereby placing no support structures in the wetlands. As outlined in Section "6.1 WATER RESOURCES," Big Rivers would also be employing erosion and sedimentation techniques that would aid in protecting the water quality of the wetland areas.

### **6.4 SOILS**

The impact to the soils of the project area by the construction of the proposed new electric transmission tie line would be minimal. Soils would be disturbed at transmission line

support pole structure locations, but the vegetation would be cut from the proposed ROW in order to achieve electrical clearances, leaving roots intact to minimize soil disturbance. As a result, only a very small amount of the total ROW would require soil disturbance. As outlined in Section "6.1 WATER RESOURCES," Big Rivers would also be implementing practices to aid in controlling erosion during the construction phase of the proposed project.

#### **6.4.1 Prime and Important Farmland Soils**

The U.S. Natural Resources Conservation Service (NRCS) was contacted regarding the proposed project in relation to prime and statewide important farmland soils. The NRCS responded that the proposed route for the electric transmission tie line will traverse a considerable amount of soils recognized as prime and important farmland soils (See NRCS letter from Mr. Calvin R. Bohannon to Mr. Gary W. Gilpin, GILPIN GROUP, February 5, 2004, Appendix B). There are no practicable alternatives to traversing these types of soils should the proposed tie line be constructed. Prime and statewide important farmland soils would be unavoidable due to the fairly long length of the proposed transmission line in relation to the large amount of these types of soils in the project impact area. The effect to the prime and important farmland soils by the proposed project will be minimal. Big Rivers has a policy of allowing agricultural practices in its ROWs so long as such practices do not interfere with or jeopardize the operation of its lines. As a result, very little, if any prime and important farmland soils will be permanently lost to production as a result of constructing the proposed project.

#### **6.5 LAND USE**

The proposed tie line would be compatible with, and would not have any significant impacts on, the existing land use within the project area. The line is proposed for location in

a rural area and is not located through any densely populated areas. As a result, the proposed line would not have impacts on any concentrated residential development. The proposed route for the line is also mostly composed of agricultural land that will remain unchanged except at support pole locations because Big Rivers has a policy of allowing agricultural production within its ROWs. Approximately one third of the proposed route extends through wooded areas; however, this represents a fairly small amount of land and will not result in a significant amount of wooded areas requiring clearing in order to achieve electrical clearances.

#### **6.6 THREATENED, ENDANGERED OR RARE SPECIES**

The U.S. Fish and Wildlife Service (FWS) was contacted regarding the proposed new electric transmission tap line in relation to threatened and endangered species. The FWS reviewed the proposed project and responded that the proposed route for Big Rivers' electric transmission line contains potential habitat for the federally endangered Indiana bat (*Myotis sodalis*) and gray bat (*myotis grisescens*), and the federally threatened Eggert's sunflower (*Helianthus eggertii*). Consequently, the FWS recommended that surveys be conducted along the proposed route to determine if the threatened sunflower exists within the proposed transmission line ROW, and whether caves are present on, or within close proximity to the proposed ROW that are used as hibernacula for either of the two endangered bats. (See FWS letter from Mr. Virgil Lee Andrews, Jr. to Mr. Gary W. Gilpin, GILPIN GROUP, February 4, 2004, Appendix B). A bat cave survey was subsequently conducted on the proposed ROW for the planned new transmission line which found no such caves that would be impacted by the proposed project (See Bat Cave Survey Report, Appendix C). A copy of the Bat Cave Survey Report was provided to the FWS. Based upon the results of the survey and the fact

that Big Rivers is committed to performing ROW clearing on the proposed ROW between October 15 and March 31, the FWS concurred with the report's findings stating, "that the proposed project is not likely to adversely affect the Indian bat and the gray bat" (See FWS letter from Mr. Virgil Lee Andrews, Jr. to Mr. Gary W. Gilpin, GILPIN GROUP, May 10, 2004, Appendix B).

Big Rivers is also committed to having a survey performed on the proposed transmission line ROW for Eggert's sunflower during the flowering period for this plant, late summer/early fall this year. Big Rivers will have the results of this survey provided to the FWS for review and will have FWS's comments pertaining to the survey provided to RUS for review. Big Rivers is further committed to following all reasonable recommendations concerning this threatened plant and no adverse affects are expected.

The Kentucky Department of Fish and Wildlife (KDFW) was contacted regarding the proposed project in relation to threatened and endangered species and, like the FWS, they were also concerned with potential impacts to the Indiana and gray bats, as well as listing the federally endangered clubshell mussel (*Pleurobema clava*) (See KDFW letter from Mr. Brad Pendley to Mr. Gary W. Gilpin, GILPIN GROUP, January 26, 2004, Appendix B). No adverse impacts would be expected to the clubshell mussel by the proposed project due to the measures outlined in Section "6.1 WATER QUALITY" of this report that would be implemented to protect the water quality of the project area.

#### **6.7 CULTURAL RESOURCES**

The proposed new electric transmission tie line would be an overhead type design with minimal ground disturbance (See Section "6.4 SOILS"). As a result, the proposed project would have minimal, if any, effect on historic resources located in the project impact

area. The Kentucky Heritage Council, State Historic Preservation Office (SHPO) was contacted pertaining to the proposed new transmission tie line in relation to important cultural resources and they concurred with this determination (See stamp signed by Mr. C. Hockensmith, January 20, 2004, for Mr. David L. Morgan on the bottom of the GILPIN GROUP letter from Mr. Gary W. Gilpin to Mr. David L. Morgan, SHPO, January 2, 2004, Appendix B).

### **6.8 AESTHETICS**

The proposed new electric transmission tie line is not expected to have any adverse impacts on the aesthetics of the project area. The proposed new tie line would be visible to motorists traveling along roads in the project area. However, the proposed route does not closely parallel any roads in the area and it crosses the roads at right angles, which would minimize the amount of the proposed transmission line that would be visible from the roads. The sections of the proposed route extending over steeply sloping terrain and through wooded areas would also aid in shielding the proposed line from view.

### **6.9 AVIATION**

The construction of the proposed new electric transmission tie line will not require notification to the Federal Aviation Administration (FAA), nor will it have any adverse impacts on navigable airspace. No structures associated with the proposed new facility will exceed the FAA height notification requirement of 200 feet aboveground and the proposed project is not located in close proximity to any airports, nor is it located within the instrument approach paths to any airports.

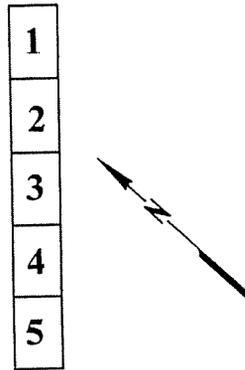
## 7.0 CONCLUSION

The environmental investigation undertaken for Big Rivers' proposed electric transmission tie line, and documented in this report, did not uncover any significant environmental impacts that will result from the construction of the proposed project. Big Rivers is also aware of the environmental commitments expressed in this document and is dedicated to following these commitments during the construction and operation of the proposed facility. Therefore, the construction of Big Rivers' proposed new electric tie line will not have any significant effects on the quality of the natural or human environment in the project area.

# APPENDIX A

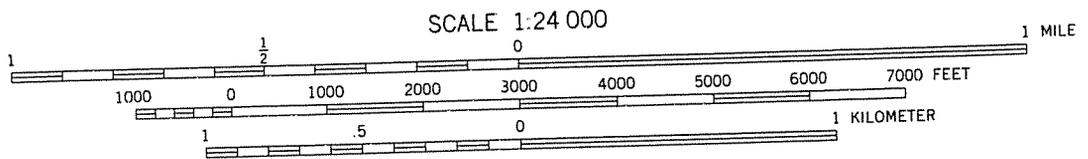
## PROJECT REFERENCE MAPS

### KEY TO MAPS

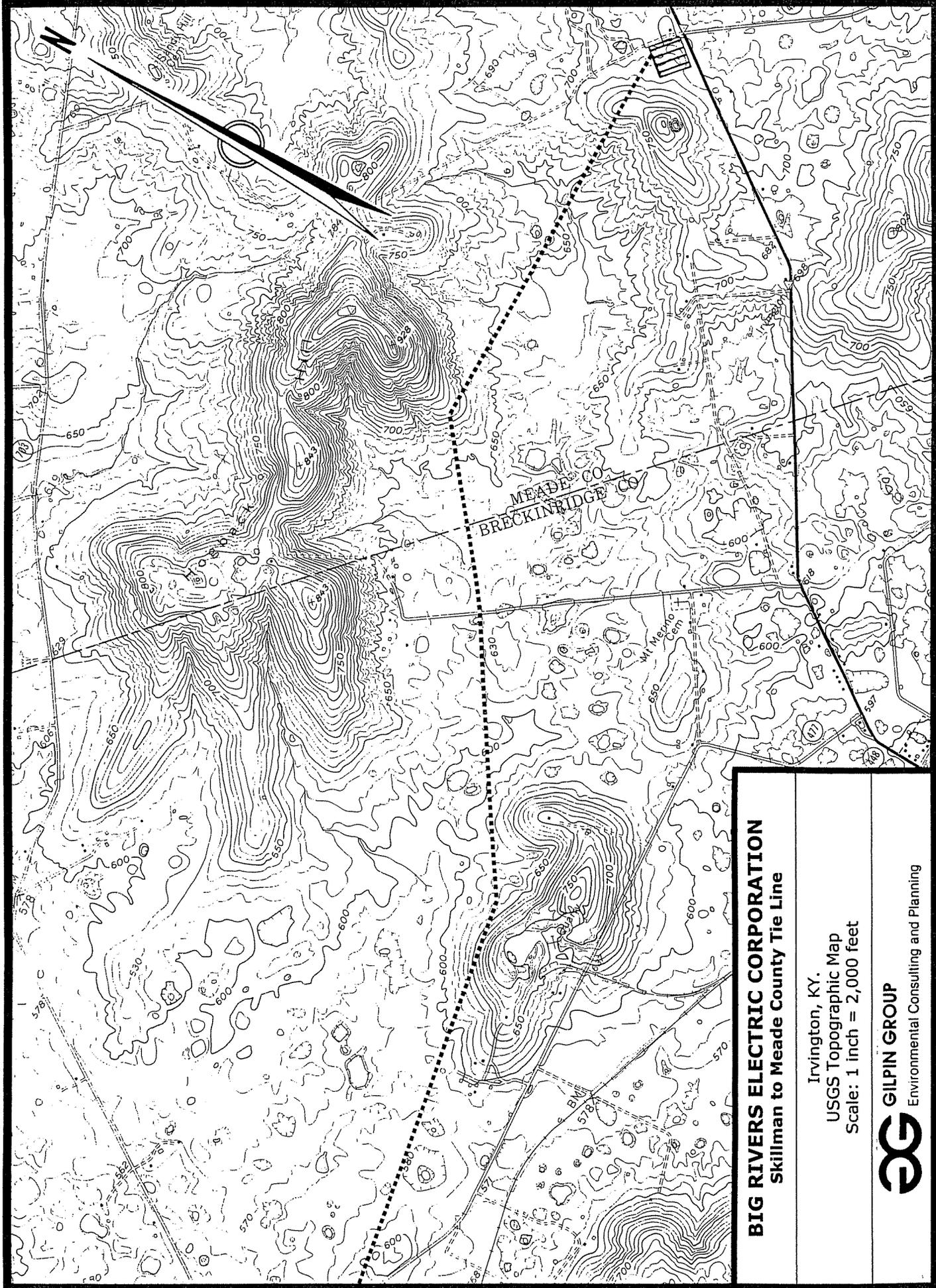


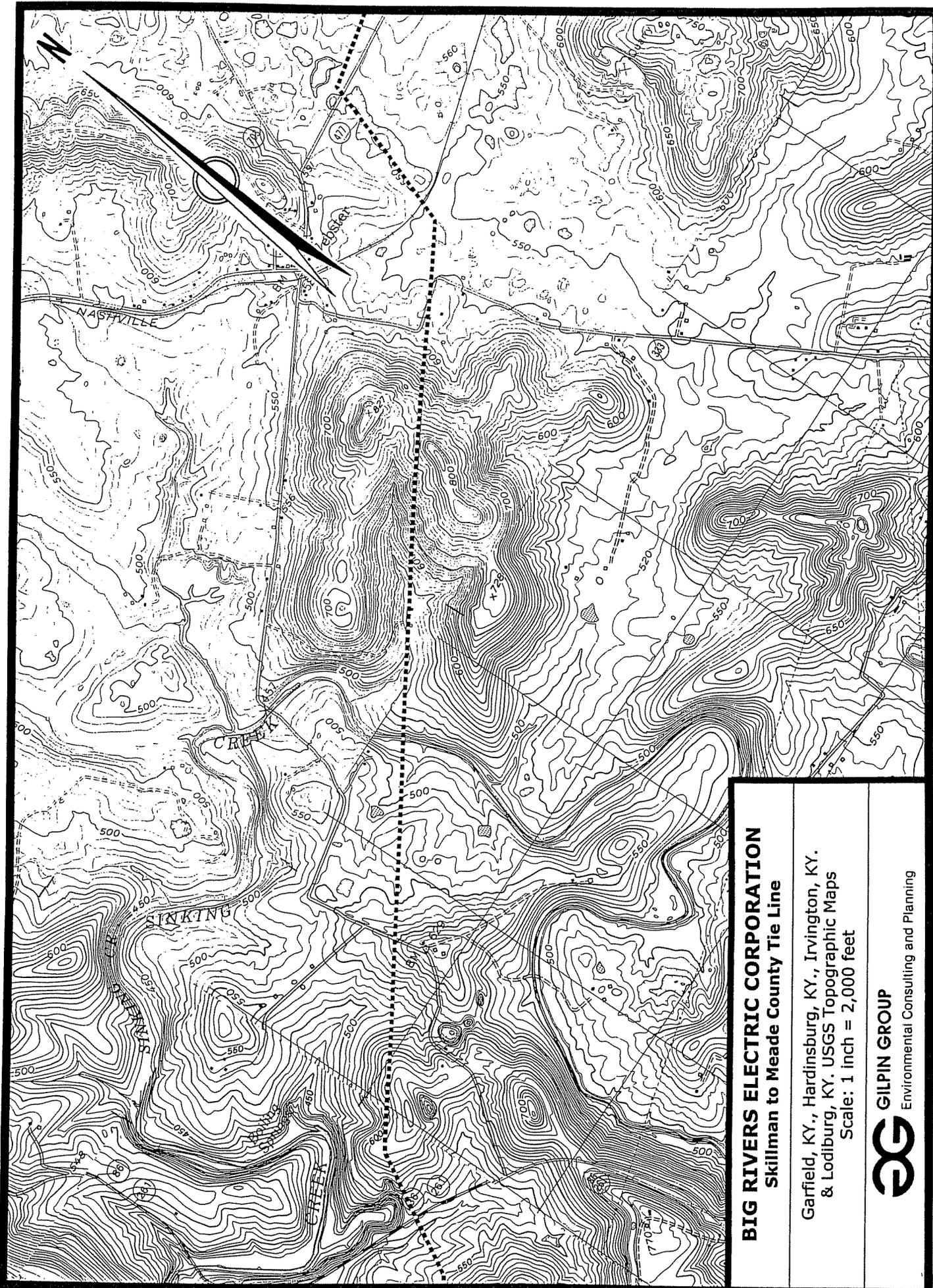
### MAP LEGEND

- ..... - Proposed Transmission Line Route
- - - - - Existing Transmission Line
-  Existing Electric Substation



**NOTE:** The proposed and existing electric facilities depicted on the maps contained in this appendix are not drawn to exact scale and are intended for location purposes only.



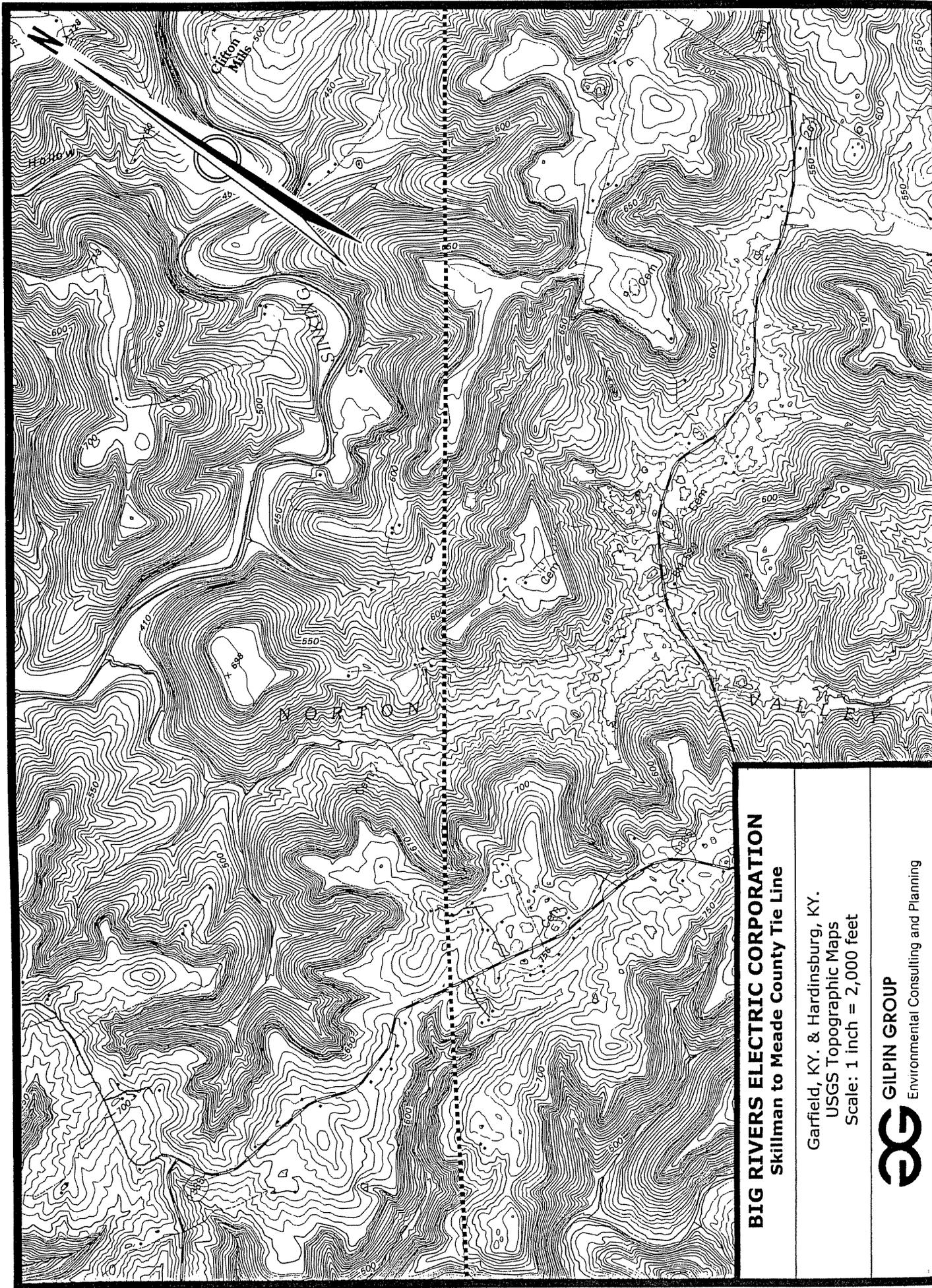


**BIG RIVERS ELECTRIC CORPORATION**  
Skillman to Meade County Tie Line

Garfield, KY., Hardinsburg, KY., Irvington, KY.  
& Lodiuburg, KY. USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

**GILPIN GROUP**  
Environmental Consulting and Planning

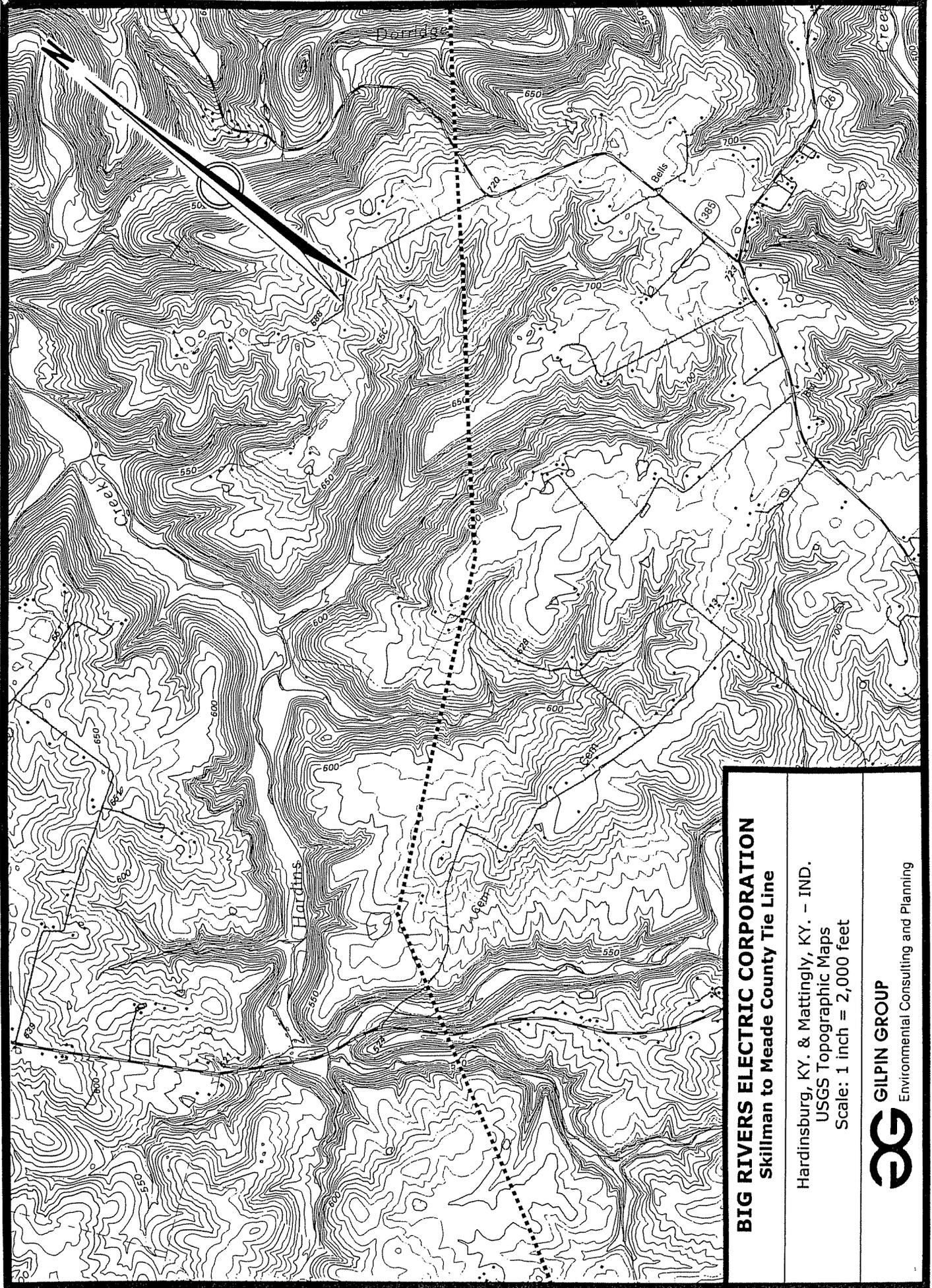




**BIG RIVERS ELECTRIC CORPORATION**  
Skillman to Meade County Tie Line

Garfield, KY. & Hardinsburg, KY.  
USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

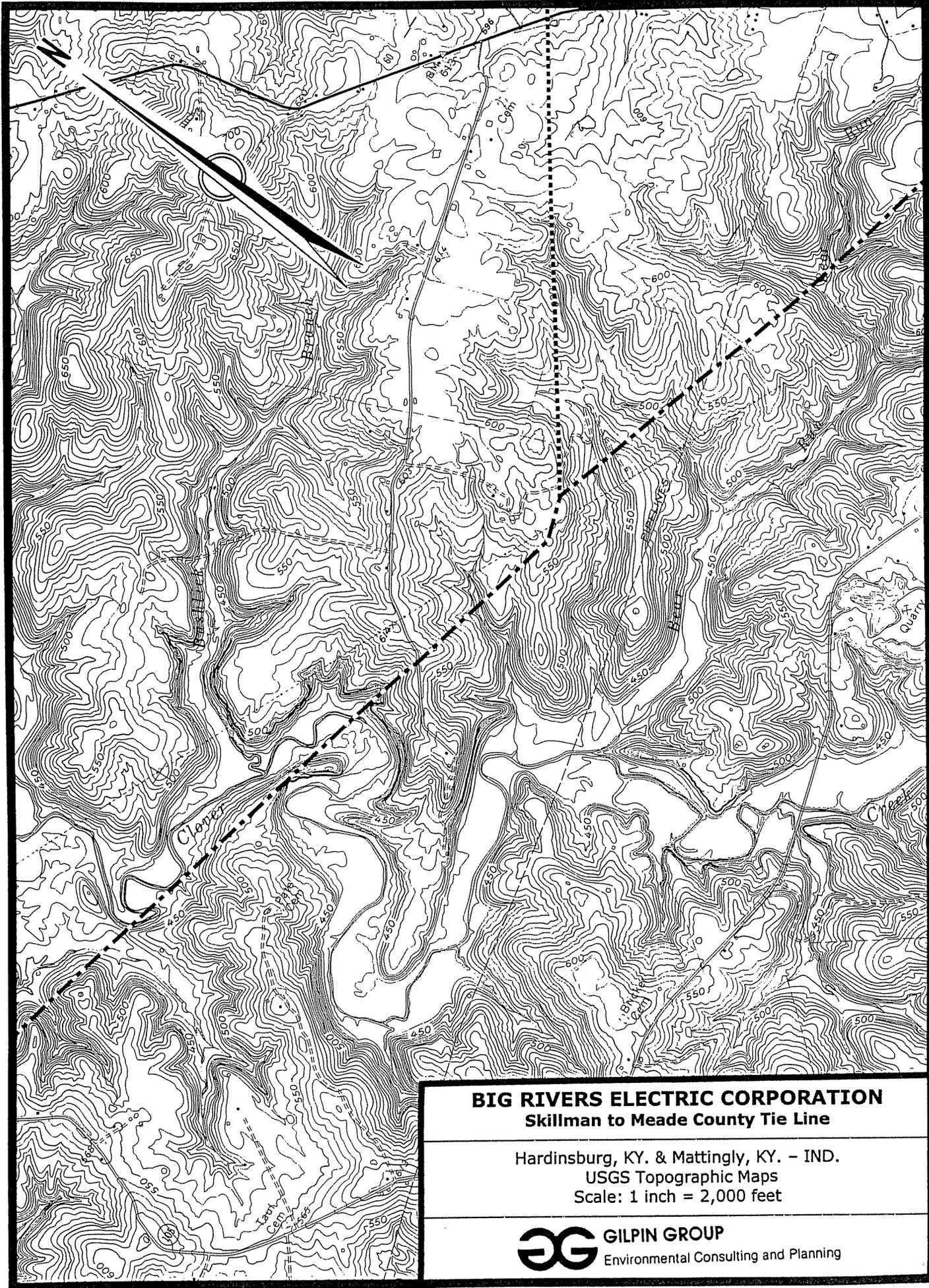
 **GILPIN GROUP**  
Environmental Consulting and Planning



**BIG RIVERS ELECTRIC CORPORATION**  
**Skillman to Meade County Tie Line**

Hardinsburg, KY. & Mattingly, KY. - IND.  
 USGS Topographic Maps  
 Scale: 1 inch = 2,000 feet

**GILPIN GROUP**  
 Environmental Consulting and Planning



**APPENDIX B**  
**AGENCY CORRESPONDENCE**

January 2, 2004

2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

Lee A. Barclay, Ph.D., Field Supervisor  
U.S. Fish and Wildlife Service  
446 Neal Street  
Cookeville, Tennessee 38501

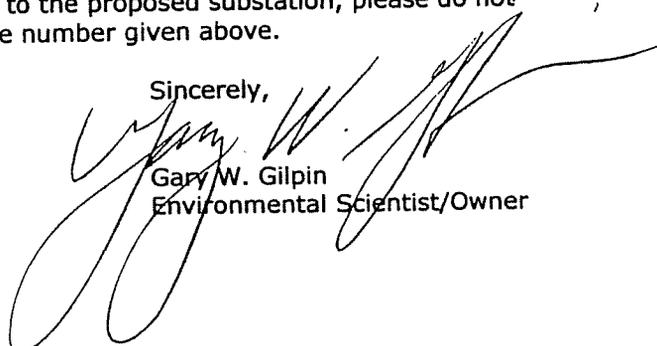
Dear Dr. Barclay:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to assess the environmental impacts associated with a proposed new electric transmission line in Breckinridge and Meade Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its own independent review and evaluation.

In addition to informing your agency of Big Rivers' plans, we are soliciting your advise and comments pertaining to the proposed new transmission line as it relates to threatened and endangered species, wildlife, wildlife refuges, wetlands and other important natural resource concerns. A concise description of the proposed electric line and copies of portions of USGS topographic maps locating the proposed new facility are enclosed for your agency's review.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed substation, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,



Gary W. Gilpin  
Environmental Scientist/Owner

cc: C. Dale Rector, Big Rivers  
Enclosures

1983-2003

20

YEARS OF SERVICE



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

3761 GEORGETOWN ROAD

FRANKFORT, KY 40601

February 4, 2004

Mr. Gary Gilpin  
Gilpin Group  
2087 Ketchner Road  
Wellsville, New York 14895

Subject: FWS #04-0439; Big Rivers Electric Corporation proposed electrical transmission line, Breckinridge County, Kentucky

Dear Mr. Gilpin:

Thank you for your correspondence of January 2, 2004 regarding the proposed electrical transmission line proposed in Breckinridge County, Kentucky, as shown on the attachments to your correspondence. Fish and Wildlife Service (Service) personnel have reviewed the information submitted, and we offer the following comments.

Information available to the Service indicates that wetlands exist in the vicinity of the proposed project. Attached is a copy of a portion of the Hardinsburg and Irvington quadrangles with the referenced wetlands highlighted. This information is provided for your convenience. Our identification of these wetlands has been made in the absence of a field inspection and does not constitute a wetland delineation for the purposes of Section 404 of the Clean Water Act. The Corps of Engineers, Louisville District, should be contacted regarding the presence of regulatory wetlands and the requirements of wetlands protection statutes.

According to our records, summer roost habitat and winter hibernacula for the endangered Indiana bat (*Myotis sodalis*) and gray bat (*Myotis grisescens*) exist within the proposed project site. Based on this information, we believe that: (1) forested areas in the vicinity of and on the project area may provide potentially suitable summer roosting and foraging habitat for the Indiana bat and potentially suitable foraging habitat for the gray bat (if suitable roosting sites are present); and (2) caves, rockshelters, and abandoned underground mines in the vicinity of and on the project area may provide potentially suitable winter hibernacula habitat for the Indiana bat and/or potentially suitable summer roosting and/or winter hibernacula habitat for the gray bat. Our belief that potentially suitable habitat may be present, and possibly occupied by this species, is based on information provided in your correspondence, that fact that the project site and surrounding area may contain forested habitats that are within the natural ranges of these species, and our knowledge of the life history characteristics of this species.

The Indiana bat uses a wide array of forested habitats, including riparian forests, bottomlands, and uplands for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in cavities of dead and live trees, and in snags (i.e., dead trees or dead portions

of live trees). Trees in excess of 16 inches diameter at breast height (DBH) are considered optimal for maternity colony roosts, but trees in excess of 9 inches DBH appear to provide suitable maternity roosting habitat. Male Indiana bats have been observed roosting in trees as small as 3 inches DBH.

Prior to hibernation, Indiana bats utilize the forest habitat around the hibernacula, where they feed and roost until temperatures drop to a point that forces them into hibernation. This "swarming" period lasts, depending on weather conditions in a particular year, from about September 15 to about November 15. This is a critical time for Indiana bats, since they are acquiring additional fat reserves and mating prior to hibernation. Research has shown that bats exhibiting this "swarming" behavior will range up to five miles from chosen hibernacula during this time. For hibernation, the Indiana bat prefers limestone caves, sandstone rockshelters, and abandoned underground mines with stable temperatures of 39 to 46 degrees F and humidity above 74 percent but below saturation.

Gray bats roost, breed, rear young, and hibernate in caves year round. They migrate between summer and winter caves and will use transient or stopover caves along the way. For hibernation, the roost site must have an average temperature of 42 to 52 degrees F. Most of the caves used by gray bats for hibernation have deep vertical passages with large rooms that function as cold air traps. Summer caves must be warm, between 57 and 77 degrees F, or have small rooms or domes that can trap the body heat of roosting bats. Summer caves are normally located close to rivers or lakes where the bats feed. Gray bats have been known to fly as far as 12 miles from their colony to feed.

We have identified at least four caves from our records that are known to contain Indiana bats and/or gray bats within one mile of the proposed alignment. According to the project location information that we were provided, it appears that three of these caves may be directly impacted by right-of-way construction activities. Therefore, we will need additional site-specific location information for the proposed transmission line in order to determine if adverse effects to these caves containing listed species would occur. Specifically, we will need detailed maps of the proposed alignment, information on the types of habitats present within the proposed right-of-way, and a description and time-table of the construction methods that will be employed to construct the right-of-way.

We believe that adverse impacts to these species are likely if your proposed transmission line would lie directly over the cave(s) or if the line was in close proximity to the cave entrance. As a result, we believe that initiation of informal consultation under section 7 of the Endangered Species Act is necessary at this time. Further, we will need to conduct an on-site inspection of the right-of-way in order to determine if direct or indirect impacts will occur. Please contact us at your earliest convenience to schedule a date and time that this inspection can occur.

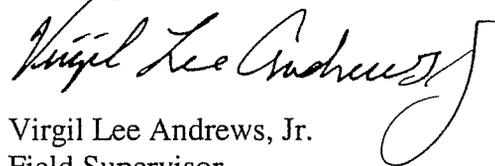
Also, we suspect that additional caves may be present within the proposed project corridor. Therefore, as an initial step, we recommend that Big Rivers Electric Corporation survey the project area for other caves, rockshelters, and underground mines, identify any such habitats that may exist on-site, and avoid impacts to those sites pending an analysis of their suitability as Indiana bat and/or gray bat habitat by this office. A qualified biologist who holds the appropriate

collection permits for these species must undertake such surveys, and we would appreciate the opportunity to approve the biologist's survey plan prior to the survey being undertaken and to review all survey results, both positive and negative. Once all potential habitat areas for these species have been identified, it will be easier for us to identify measures that would avoid and/or minimize potential impacts to these species.

Also, the federally threatened Eggert's sunflower (*Helianthus eggertii*) may occur in the vicinity of the project area. Eggert's sunflower occurs in barrens and woodland ecosystems where a mix of grassy, treeless openings lies within a thin overstory of small to medium sized trees, usually oaks. This species has also been found on roadsides and in fields where barrens formerly existed. You should survey the project area to determine the presence or absence of these species within the project area in an effort to determine if potential impacts to these species are likely. A qualified biologist, and preferably one who holds the appropriate collection permits for the species, must undertake such surveys, and we would appreciate the opportunity to approve the biologist's survey plan prior to the survey being undertaken and to review all survey results, both positive and negative. If these species are identified, we request written notification of such occurrence(s) and further coordination and consultation with you.

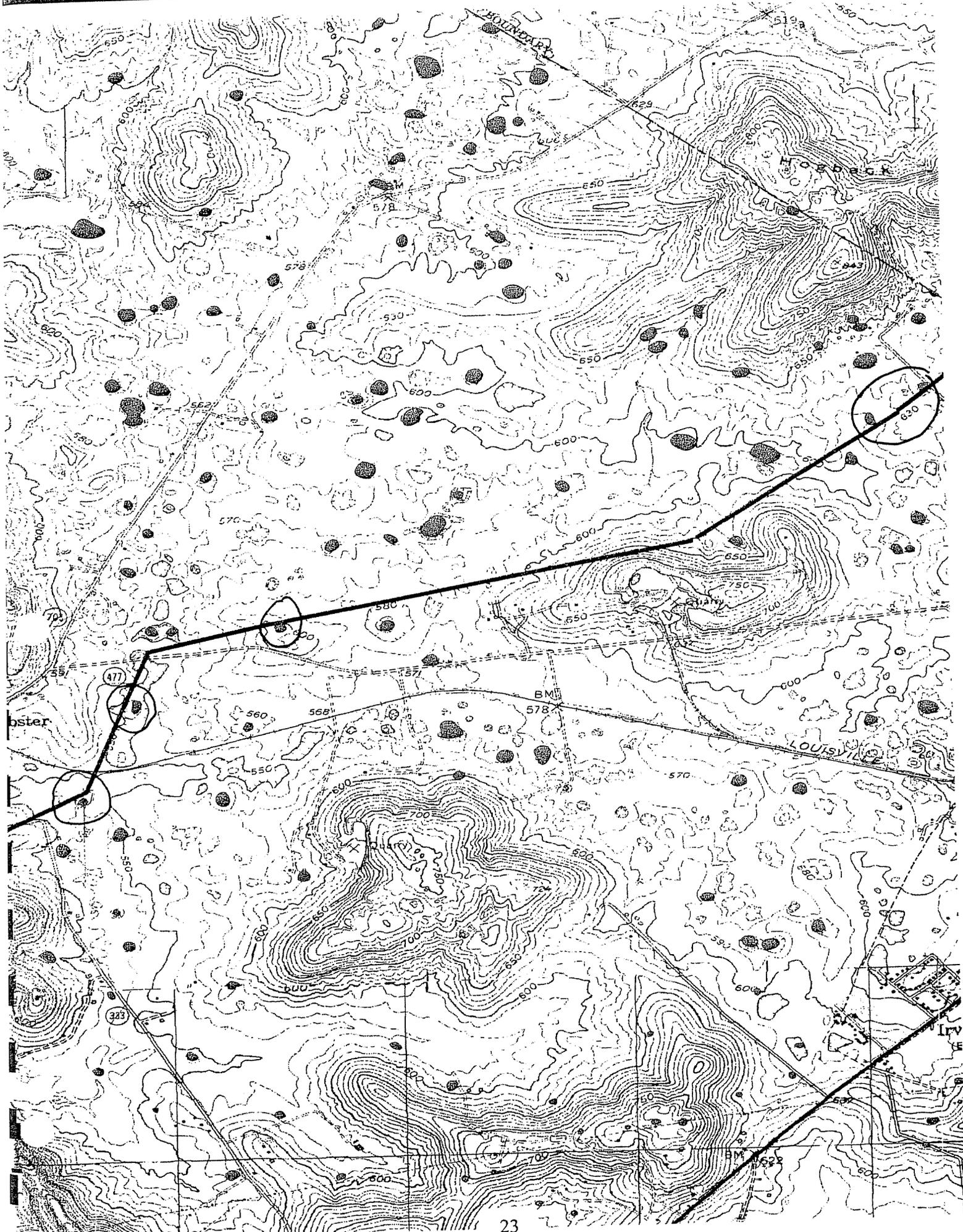
Thank you for the opportunity to comment on this proposed action. Please note that section 7(d) of the Endangered Species Act requires that a license or permit applicant shall not make any irreversible or irretrievable commitment of resources on a project which would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures to avoid impacts to the listed species. No construction or habitat removal activities associated with the proposed project should be undertaken until informal and formal consultation (if necessary) are completed. If you have any questions regarding the information which we have provided, please contact me or Mindi Brady at (502)/695-0468.

Sincerely,



Virgil Lee Andrews, Jr.  
Field Supervisor

xc: Tracy Wethington, KDFWR, Frankfort, KY



oster

LOUISVILLE



April 6, 2004

2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

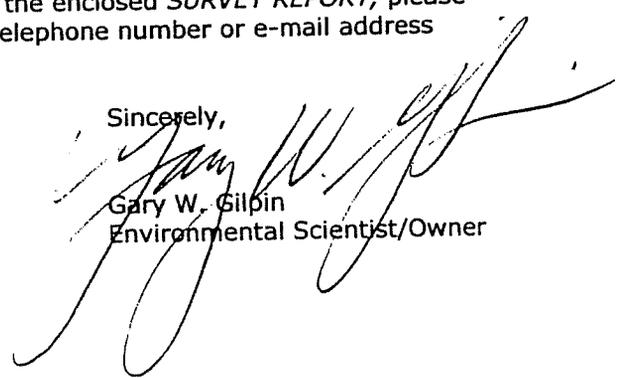
Virgil Lee A. Andrews, Jr., Field Supervisor  
U.S. Fish and Wildlife Service  
3761 Georgetown Road  
Frankfort, Kentucky 40601

Dear Mr. Andrews:

Enclosed is a *BAT CAVE SURVEY REPORT* for Big Rivers Electric Corporation's proposed Skillman to Meade County Electric Transmission Line, which documents the results of the survey that was requested by your office and coordinated with Ms. Mindi Brady. The report is being provided to your office for review and comment.

Should you or your staff have any questions regarding the enclosed *SURVEY REPORT*, please do not hesitate to contact me at the mailing address, telephone number or e-mail address given above.

Sincerely,

  
Gary W. Gilpin  
Environmental Scientist/Owner

cc: C. Dale Rector, Big Rivers  
Joe Settles  
Enclosure

1983-2003

20

YEARS OF SERVICE



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

3761 GEORGETOWN ROAD

FRANKFORT, KY 40601

May 10, 2004

Mr. Gary Gilpin  
Gilpin Group  
2087 Ketchner Road  
Wellsville, New York 14895

Subject: FWS #04-0961; Bat Cave Survey Report for Big Rivers Electric Corporation,  
Meade and Breckinridge Counties, Kentucky

Dear Mr. Gilpin:

Thank you for your letter and enclosures of April 6, 2004, regarding the bat cave survey report for the proposed Skillman to Meade County Electric Transmission Tie Line for the Big Rivers Electric Corporation (FWS #04-0439). Fish and Wildlife Service (Service) biologists have reviewed the document and we offer the following comments.

According to the report, no unknown caves were discovered within the project impact area that would be used as potential roosting habitat or hibernacula for either the Indiana bat or gray bat. Further, Big Rivers is also committed to performing right-of-way (ROW) clearing activities on the ROW between October 15 and March 31 to avoid effects on Indiana bats potentially roosting in the project impact area. Based on the results of the survey and the fact that tree clearing will be limited to the time period between October 15 and March 31, we concur that the proposed project is not likely to adversely affect the Indiana bat and gray bat

We appreciate the opportunity to comment on this survey report, and look forward to reviewing the survey report for Eggert's sunflower in the near future. If you have any questions or if we can be of further assistance, please contact Mindi Brady at (502)/695-0468 (ext.229).

Sincerely,

Virgil Lee Andrews, Jr.  
Field Supervisor

January 2, 2004

2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

Calvin R. Bohannon  
District Conservationist  
U.S. Natural Resource Conservation Service  
105 East 4<sup>th</sup> Street  
Hardinsburg, Kentucky 40143

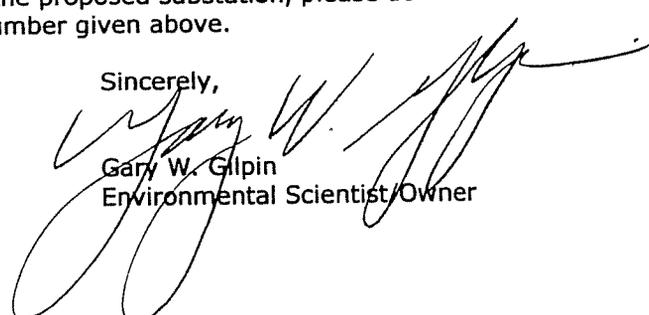
Dear Mr. Bohannon:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to assess the environmental impacts associated with a proposed new electric transmission line in Breckinridge and Meade Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its own independent review and evaluation.

In addition to informing your agency of Big Rivers' plans, we are soliciting your advise and comments pertaining to the Breckinridge County portion of the proposed new transmission line in relation to prime and important farmland soils, and important natural resource concerns. A concise description of the proposed electric line and copies of portions of USGS topographic maps locating the proposed new facility are enclosed for your agency's review.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed substation, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,

  
Gary W. Gilpin  
Environmental Scientist/Owner

cc: C. Dale Rector, Big Rivers  
Enclosures

1983-2003

20

YEARS OF SERVICE

United States Department of Agriculture



NRCS

Natural  
Resources  
Conservation  
Service

105 E. 4<sup>th</sup> Street  
Hardinsburg, KY 40143

February 5, 2004

Gary W. Gilpin  
Environmental Specialist  
GILPIN GROUP  
Environmental Consulting and Planning  
2087 Ketcher Road  
Wellsville, New York 14895

RE: Big Rivers Electric Transmission Line  
Breckinridge and Meade Counties, Kentucky

Dear Mr. Gilpin:

Thanks in advance for the opportunity to comment on the proposed new electric transmission line to be constructed by Big Rivers Corporation of Henderson.

The proposed route of this transmission line had it crossing large open fields of cropland, hay land, pastureland, and woodland. In some locations it appears that the proposed line is located close to existing farmsteads, including houses and barns.

In reference to open field situations where row crops or hay are being grown; I would recommend that the installation of the electric line be completed between growing seasons to reduce the impact on soil structure and damage to existing row crops and forages. It would be good wherever possible if utility poles could be placed in fencelines and field borders to accommodate large equipment such as combines and disks. Pole location would not be as crucial on rolling pastureland and woodland acreage.

Much of the right a way in Meade County from the existing substation to the Breckinridge County line consists of prime and statewide important soils. The prime farmland soils have been highlighted in green and the statewide important soils have been highlighted in red on the attached soils maps. (You will also find enclosed a legend for these soils). This right a way includes approximately 2,833 ft. of prime farmland soils and 5,657 ft. of statewide important soils. Approximately 17,961 ft. of the right a way in Breckinridge County contains prime farmland soils and 21,446 ft. contains statewide important soils.

Although most of the soils along this right a way in Meade County are deep well drained (CrB and CrC2); I feel that compaction may be a major concern during construction activities. The characteristics of the soils in Breckinridge County change after the right-a-way tops the Sinking Creek Hill. Many of the soils on these ridges have a fragipan at approximately 2 feet deep. Soils such as the Sadler Silt loam (SaA and SaB2) along with the Zanesville Silt Loam (ZaB2 and ZaC2) can become extremely water togged after heavy rainfall events. It is very important to adjust construction activities to reduce rutting, compaction, and erosion. Consideration may be

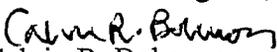
given to subsoiling and/or V-ripping with farm equipment if compaction cannot be avoided. Tillage operations should be followed by a temporary cover crop or permanent seeding in hayland fields. Where equipment will be crossing streams and natural drains, I would recommend that you incorporate the standard stream crossing and silt control measures to control sediment movement and protect water quality.

Where the transmission line will be passing though previously undisturbed woodland, it is important to keep the right a way to an acceptable minimum. There are several areas along this route where permanent tracts of woodland will be impacted. Where right-a-ways are cleared in woodland, erosion control measures, and suitable vegetative treatment are recommended. Terracing and grade control structures may be needed on some of the steep slopes.

Where the proposed route comes in class proximity to residences and/or barns; it is my suggestion that rows of trees and shrubs be placed at the outside edge of the right a way adjacent to these structures. This would make sure that the surroundings are aesthetically pleasing. The discretion to plant trees and/or shrubs would be at the description of the landowner with the concurrence of Big Rivers.

Once again, thanks for the opportunity to make comments related to the environmental planning for this project. If you have any questions pertaining to these comments; please feel free to contact me at 270-756-2776 (Ext.3) or [cbohanno@ky.usda.gov](mailto:cbohanno@ky.usda.gov).

With Sincere Regards,

  
Calvin R. Bohannon  
District Conservationist

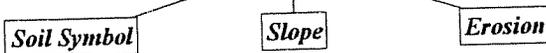
Enclosures

**SOIL MAP LEGEND AND SOIL INTERPRETATION**

CAPABILITY CLASS	CROPLAND	CAPABILITY CLASS	PERMANENT VEGETATION
<b>I</b>	Soils that have no limitations that effect crops and require simple management systems	<b>V</b>	Soils that are ponded, flooded, or have limitations other than erosion which are impractical to overcome
<b>II</b>	Soils that have few limitations that effect crops and require slightly difficult management systems	<b>VI</b>	Slope, shallowness, or other conditions limit use to permanent vegetation.
	Soils that have some limitations that effect crops and require very careful management systems.		Severe limitations restrict use to limited grazing, woodland or wildlife.
	Soils that have severe limitations that effect crops and require extremely careful management systems.		Rock outcrops and other extreme features limit use to forest, wildlife, and recreation

**DEFINITION OF KEY CHARACTERISTICS FOR SOIL DESCRIPTIONS**

Example: CnD3



**SLOPE**

- A - 0 - 2% - Nearly Level
- B - 2 - 6% - Gently Sloping
- C - 6 - 12% - Sloping
- D - 12 - 20% - Moderately Sloping
- E - 20 - 30% - Steep
- F - 30 + - Very Steep

**EROSION**

- 2 - 25% to 75% of topsoil has been removed by erosion.
- 3 - 75% to 100% of the original surface layer has been removed by erosion.

**SOIL TEXTURE (subsoil)**

Relative porportion of clay, silt, and sand in particular soil. Textures are grouped into three classes:

- Clayey soils
  - Clay
  - Silty Clay
  - Sandy Clay
- Loamy soils
  - Silt Loam
  - Silty Clay Loam
  - Sandy Clay Loam
  - Clay Loam
  - Loam
  - Sandy Loam
  - Silt
- Sandy Soils
  - Loamy Sand
  - Sand

**DEPTH OF ROOTING ZONE**

- Shallow ..... 0" - 20"
- Moderately Deep ..... 20" - 40"
- Deep ..... 40" - 60"
- Very Deep ..... More Than 60"

**PERMEABILITY**

- Rate of water movement through soil.
- Rapid ..... 6" to 20" per hour
  - Mod. Rapid ..... 2.0" to 6.0" per hour
  - Moderate ..... 0.6" to 2.0" per hour
  - Mod. Slow ..... 0.2" to 0.6" per hour
  - Slow ..... 0.06" to 0.2" per hour
  - Very Slow ..... Less than 0.06" per hour

# Non-Technical Descriptions

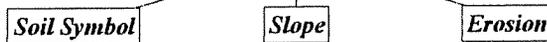
<i>Soil Symbol</i>	<i>Capability Class</i>	<i>Soil Name and Description</i>
<i>CrB2</i> <i>P</i>	<i>II e</i>	Crider silt loam, 2 to 6 percent slopes, eroded Well drained, loamy upland soil with a high yield potential. The root zone and depth to bedrock are more than 60 inches. About half the original surface layer has been lost by erosion.
<i>Ld</i> <i>P</i>	<i>II w</i>	Lindside silt loam, occasionally flooded Nearly level, slightly wet loamy soil on bottoms and upland drainageways. The root zone is deep. This soil has a seasonal water table at 1 1/2 to 3 feet, unless drained.
<i>BaC2</i> <i>S</i>	<i>III e</i>	Baxter very gravelly silt loam, karst, 6 to 12 percent slopes, eroded Upland soils on karst sideslopes with a deep root zone. Gravel content throughout the soil reduces available water and affects workability. The surface layer has a higher clay content because of past erosion.
<i>CrC2</i> <i>S</i>	<i>III e</i>	Crider silt loam, 6 to 12 percent slopes, eroded Well drained, loamy upland soil. The root zone and depth to bedrock are more than 60 inches. About half the original topsoil has been lost by erosion.
<i>CiC3</i> <i>NI</i>	<i>IV e</i>	Crider silty clay loam, 6 to 12 percent slopes, severely eroded Upland soil with a root zone and depth to bedrock more than 60 inches deep. Plow layer is mostly subsoil affecting workability and crusting.
<i>CiD3</i> <i>NI</i>	<i>VI e</i>	Crider silty clay loam, 12 to 20 percent slopes, severely eroded Upland soil with a root zone and depth to bedrock more than 60 inches deep. Plow layer is mostly subsoil. Best use is for pasture or hay.
<i>FcC2</i> <i>S</i>	<i>VI s</i>	Fredonia-Crider complex, karst, rocky, 6 to 12 percent slopes, eroded Rocky, clayey and loamy soils on ridgetops and sideslopes. Root zone and depth to bedrock range from 20 to 40 inches in Fredonia soils and deeper than 60 inches in Crider soils. Rockiness and erodibility limit cropland use. Normally used for forage crops.

**SOIL MAP LEGEND AND SOIL INTERPRETATION**

<b>CAPABILITY CLASS</b>	<b>CROPLAND</b>	<b>CAPABILITY CLASS</b>	<b>PERMANENT VEGETATION</b>
	Soils that have no limitations that effect crops and require simple management systems	<b>V</b>	Soils that are ponded, flooded, or have limitations other than erosion which are impractical to overcome
<b>II</b>	Soils that have few limitations that effect crops and require slightly difficult management systems		Slope, shallowness, or other conditions limit use to permanent vegetation.
	Soils that have some limitations that effect crops and require very careful management systems.		Severe limitations restrict use to limited grazing, woodland or wildlife
	Soils that have severe limitations that effect crops and require extremely careful management systems.		Rock outcrops and other extreme features limit use to forest, wildlife, and recreation.

**DEFINITION OF KEY CHARACTERISTICS FOR SOIL DESCRIPTIONS**

*Example: CnD3*



**SLOPE**

- A - 0 - 2% - Nearly Level*
- B - 2 - 6% - Gently Sloping*
- C - 6 - 12% - Sloping*
- D - 12 - 20% - Moderately Sloping*
- E - 20 - 30% - Steep*
- F - 30 + - Very Steep*

**EROSION**

- 2 - 25% to 75% of topsoil has been removed by erosion.*
- 3 - 75% to 100% of the original surface layer has been removed by erosion.*

**SOIL TEXTURE (subsoil)**

*Relative porportion of clay, silt, and sand in particular soil. Textures are grouped into three classes:*

- Clayey soils**
  - Clay*
  - Silty Clay*
  - SandyClay*
- Loamy soils**
  - Silt Loam*
  - Silty Clay Loam*
  - Sandy Clay Loam*
  - Clay Loam*
  - Loam*
  - Sandy Loam*
  - Silt*
- Sandy Soils**
  - Loamy Sand*
  - Sand*

**DEPTH OF ROOTING ZONE**

- Shallow ..... 0" - 20"*
- Moderately Deep ..... 20" - 40"*
- Deep ..... 40" - 60"*
- Very Deep ..... More Than 60"*

**PERMEABILITY**

*Rate of water movement through soil*

- Rapid ..... 6" to 20" per hour*
- Mod. Rapid ..... 2.0" to 6.0" per hour*
- Moderate ..... 0.6" to 2.0" per hour*
- Mod. Slow ..... 0.2" to 0.6" per hour*
- Slow ..... 0.06" to 0.2" per hour*
- Very Slow ..... Less than 0.06" per hour*

# Non-Technical Descriptions

Soil Symbol	Capability Class	Soil Name and Description
Co P	II s	Clifty gravelly silt loam, occasionally flooded Nearly level bottomland soil with a deep root zone. Plow layer contains many coarse fragments that may interfere with tillage. Plants may show moisture stress during dry periods.
CrB2 P	II e	Crider silt loam, 2 to 6 percent slopes, eroded Well drained, loamy upland soil with a high yield potential. The root zone and depth to bedrock are more than 60 inches. About half the original surface layer has been lost by erosion.
Na P	II w	Newark silt loam, occasionally flooded Nearly level, wet bottom soil with a seasonal high water table at a depth of 6 to 18 inches. Floods for brief periods in some years, in winter and early spring. Yield is good when drained.
SaA P	II w	Sadler silt loam, 0 to 2 percent slopes Silty upland soil with a fragipan at a depth of about 24 inches that slows water movement and restricts certain crops.
SaB2 P	II e	Sadler silt loam, 2 to 6 percent slopes, eroded Silty upland soil with a fragipan at a depth of about 24 inches. About half the topsoil has been lost by erosion. Highly erodible.
ZaB2 P	II e	Zanesville silt loam, 2 to 6 percent slopes, eroded Upland soil that has a fragipan at a depth of about two feet that slows water movement and restricts roots. The soil has good workability, moderate yield potential, and is highly erodible when ground cover is removed. About half of the topsoil has eroded away.
CaC2 S	III e	Caneyville silt loam, 6 to 12 percent slopes, eroded Clayey soils on ridges and sideslopes. Root zone and depth to bedrock range from 20 to 35 inches. Topsoil is thin due to erosion. Low yield potential.
CrC2 S	III e	Crider silt loam, 6 to 12 percent slopes, eroded Well drained, loamy upland soil. The root zone and depth to bedrock are more than 60 inches. About half the original topsoil has been lost by erosion.

# Non-Technical Descriptions

Soil Symbol	Capability Class	Soil Name and Description
EkC2 S	III e	Elk silt loam, 6 to 12 percent slopes, eroded Loamy soil on stream terraces. About half the topsoil layer has been lost by erosion. Yield potential is good. Depth to bedrock is over 60 inches.
GIC2 S	III e	Gilpin silt loam, 6 to 12 percent slopes, eroded Loamy upland soils with a root zone shallower than 40 inches. Available water capacity and yield potential are moderate.
RnC2 S	III e	Rosine silt loam, 6 to 12 percent slopes, eroded Upland soils underlain by shale or siltstone. The soils have clayey subsoils that slow water movement through the soil. About half the original surface layer has been lost by erosion.
ZaC2 S	III e	Zanesville silt loam, 6 to 12 percent slopes, eroded Upland soil that has a fragipan at a depth of about two feet that slows water movement and restricts roots. Plow layer is partly subsoil due to past erosion. Yield potential is low, and soil erodibility is high unless ground cover is maintained.
CrD2 NI	IV e	Crider silt loam, 12 to 20 percent slopes, eroded Silty upland soil with high available water capacity and a depth to bedrock of over 60 inches. About half the original surface layer has been lost by erosion.
HbC3 NI	IV e	Hammack-Baxter complex, karst, 6 to 12 percent slopes, severely eroded Deep upland soils on karst sideslopes. Hammack soils have a thin silt layer over gravelly and clayey material. Baxter soils are clayey and have gravel content throughout the soil that reduces available water and affects workability. Most of the original topsoil has been lost by erosion.
RoC3 NI	IV e	Rosine silty clay loam, 6 to 12 percent slopes, severely eroded Upland soils underlain by shale or siltstone. The soils have clayey subsoils that slow water movement through the soil. Most of the original surface layer has been lost by erosion.
RsD2 NI	IV e	Rosine-Gilpin-Lenberg complex, 12 to 20 percent slopes, eroded Upland soils underlain by shale, siltstone, or sandstone. The Rosine and Lenberg soils have clayey subsoils that slow water movement through the soil. About half the original surface layer has been lost by erosion.

# Non-Technical Descriptions

<i>Soil Symbol</i>	<i>Capability Class</i>	<i>Soil Name and Description</i>
ZnC3 NI	IV e	Zanesville silty clay loam, 6 to 12 percent slopes, severely eroded Upland soil that has a fragipan at a depth of about one foot that slows water movement and restricts roots. The plow layer is nearly all subsoil. The soil has medium workability, low yield potential, and is erodible when ground cover is removed.
CeD3 NN	VI e	Caneyville silty clay, 12 to 20 percent slopes, severely eroded Clayey soil on ridges and sideslopes. Root zone and depth to bedrock range from 20 to 40 inches. Most of the topsoil has eroded away restricting uses to pasture and woodland.
CkD NI	VI e	Caneyville-Rock Outcrop complex, 12 to 30 percent slopes Clayey soils and rock outcrops that cover 10-50 percent of the surface, on ridges and sideslopes. Root zone is restricted at depth of 20 to 40 inches because of bedrock. Slopes and rock outcrop severely restrict use of this unit.
FcC2 S	VI s	Fredonia-Crider complex, karst, rocky, 6 to 12 percent slopes, eroded Rocky, clayey and loamy soils on ridgetops and sideslopes. Root zone and depth to bedrock range from 20 to 40 inches in Fredonia soils and deeper than 60 inches in Crider soils. Rockiness and erodibility limit cropland use. Normally used for forage crops.
FcD2 NI	VI s	Fredonia-Crider complex, karst, rocky, 12 to 20 percent slopes, eroded Clayey and loamy soils on ridges and sideslopes. Root zone and depth to bedrock are from 20 to 40 inches in Fredonia soils and greater than 60 inches in Crider soils. Suited to pasture or woodland.
RsD3 NI	VI e	Rosine-Gilpin-Lenberg complex, 12 to 20 percent slopes, severely eroded Clayey upland soils underlain by shale, siltstone, or sandstone. The original surface layer has been lost by erosion, and the soils have poor workability. Yield potential is low.
RsE NI	VI e	Rosine-Gilpin-Lenberg complex, very rocky, 20 to 30 percent slopes Upland soils underlain by shale, siltstone, or sandstone. The Rosine and Lenberg soils have clayey subsoils that slow water movement through the soil. The soils are suited to permanent vegetation.
FrD3 NI	VII s	Fredonia-Crider complex, karst, very rocky, 6 to 20 percent slopes, severely eroded Clayey and loamy soils on ridges and sideslopes. Root zone and depth to bedrock range from 20 to 40 inches in Fredonia soils and deeper than 60 inches in Crider soils. Topsoil is very thin due to past erosion. Rockiness restricts land use to forage or woodland.

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## *Non-Technical Descriptions*

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<i>Soil Symbol</i>	<i>Capability Class</i>	<i>Soil Name and Description</i>
<i>GwF</i> <i>NI</i>	<i>VII e</i>	Gilpin-Dekalb-Rock Outcrop complex, 30 to 60 percent slopes Upland soils and Rock outcrop on steep hillsides. The root zone extends to bedrock at a depth of 20 to 40 inches. The soils are suited to woodland.
<i>VrF</i> <i>NI</i>	<i>VII e</i>	Varilla-Gilpin-Rock Outcrop complex, very bouldery, 20 to 65 percent slopes Loamy upland soils and rock outcrops on steep hillsides. Varilla soils are more than 40 inches to bedrock, droughty, and have a low yield potential. Gilpin soils are 20 to 40 inches to bedrock. Steep slopes, boulders, and rock outcrops severely restrict the use of this unit.

January 2, 2004

2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

Scott Aldridge  
District Conservationist  
U.S. Natural Resource Conservation Service  
1194-B Old Ekron Road  
Brandenburg, Kentucky 40108-1701

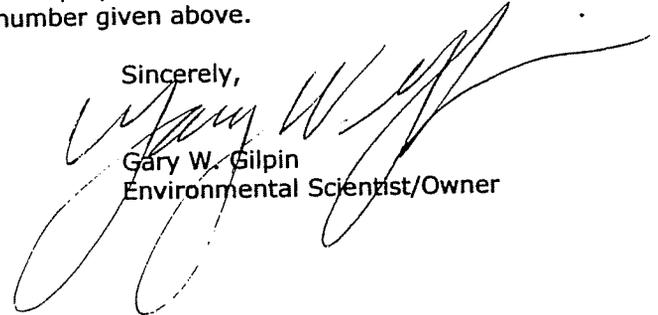
Dear Mr. Aldridge:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to assess the environmental impacts associated with a proposed new electric transmission line in Breckinridge and Meade Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its own independent review and evaluation.

In addition to informing your agency of Big Rivers' plans, we are soliciting your advise and comments pertaining to the Meade County portion of the proposed new transmission line in relation to prime and important farmland soils, and important natural resource concerns. A concise description of the proposed electric line and copies of portions of USGS topographic maps locating the proposed new facility are enclosed for your agency's review.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed substation, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,



Gary W. Gilpin  
Environmental Scientist/Owner

cc: C. Dale Rector, Big Rivers  
Enclosures

*2/3/04 - Spoke w/ Mr. Aldridge & he stated that Mr. Bohannon would be commenting on all projects.*

1983-2003

20

YEARS OF SERVICE

#10,885

CH

January 2, 2004

**RECEIVED**  
JAN 8 2004

2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

David L. Morgan  
Director and State Historic Preservation Officer  
Kentucky Heritage Council  
The State Historic Preservation Office  
300 Washington Street  
Frankfort, Kentucky 40601

**KY HERITAGE COUNCIL**

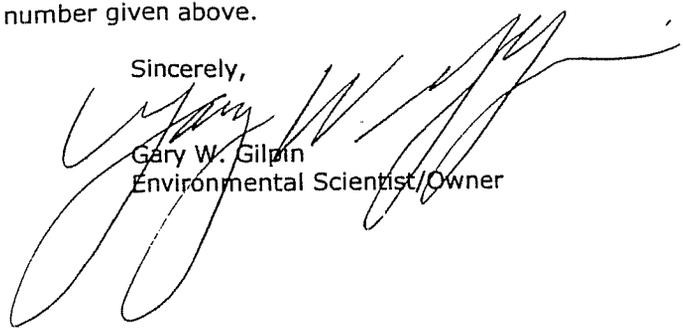
Dear Mr. Morgan:

GILPIN GROUP - Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to assess the environmental impacts associated with a proposed new electric transmission line in Breckinridge and Meade Counties, Kentucky. The environmental report will be submitted to the ~~USDA, Rural Utilities Service~~ for its own independent review and evaluation.

In addition to informing your agency of Big Rivers' plans, we are soliciting your advise and comments pertaining to the proposed new transmission line in relation to properties of historic and archaeological significance currently listed in, or eligible for inclusion in the *National Register of Historic Places*; and any other areas of specific cultural resource concern. A concise description of the proposed electric line and copies of portions of USGS topographic maps locating the proposed new facility are enclosed for your agency's review.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed substation, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,



Gary W. Gilpin  
Environmental Scientist/Owner

cc: C. Dale Rector, Big Rivers  
Enclosures

**Concur**

**No Effect on Historic Properties**  
by E. Horbenomith, Date 1-20-04  
for David L. Morgan  
Kentucky State Historic Preservation Officer

1983-2003  
**20**  
YEARS OF SERVICE

January 2, 2004

2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

Marla T. Barbour  
Fisheries Biologist III  
Kentucky Department of Fish & Wildlife  
Arnold L. Mitchell Building  
#1 Game Farm Road  
Frankfort, Kentucky 40601

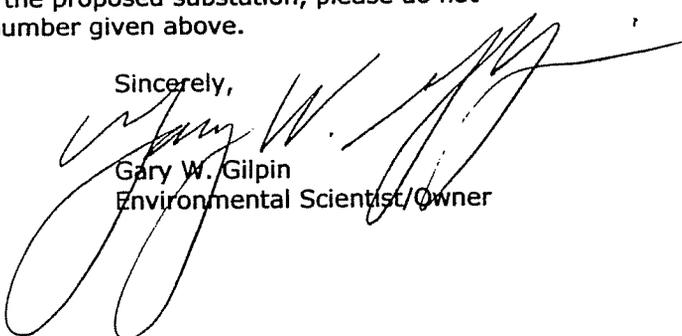
Dear Ms. Barbour:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to assess the environmental impacts associated with a proposed new electric transmission line in Breckinridge and Meade Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its own independent review and evaluation.

In addition to informing your agency of Big Rivers' plans, we are soliciting your advise and comments pertaining to the proposed new transmission line as it relates to threatened, endangered and rare species. A concise description of the proposed electric line and copies of portions of USGS topographic maps locating the proposed new facility are enclosed for your agency's review.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed substation, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,

  
Gary W. Gilpin  
Environmental Scientist/Owner

cc: C. Dale Rector, Big Rivers  
Enclosures

1983-2003

20

YEARS OF SERVICE

**FISH & WILDLIFE COMMISSION**

Mike Boatwright, Paducah  
Tom Baker, Bowling Green  
Allen K. Gailor, Louisville  
Ron Southall, Elizabethtown  
James R. Rich, Taylor Mill, Chairman  
Frank Brown, Richmond  
Doug Hensley, Hazard  
Dr. Robert C. Webb, Grayson  
David H. Godby, Somerset



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF FISH AND WILDLIFE RESOURCES  
C. THOMAS BENNETT, COMMISSIONER

January 26, 2004

Gary Gilpin  
Gilpin Group  
2087 Ketchner Road  
Wellsville, NY 14895

RE: Threatened/endangered species, critical habitat review, and potential environmental impacts for the Big Rivers 17 Mile Transmission Line Expansion, Breckinridge and Meade Counties, Kentucky.

Dear Mr. Gilpin:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that federally threatened and endangered species are known to occur within a 10 mile radius of the project area (see attached list). Sampling of suitable habitat may be required. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

The Kentucky Fish and Wildlife Information System (KFWIS) indicates that state threatened or endangered (T&E) species are known to occur in the project area (see attached list). Please use necessary precautions to minimize any impact this project may have on these species.

Based on this information, KDFWR makes the following recommendations.

In areas in which Indiana bats are known to occur, any wooded areas that may be impacted by the proposed project should be examined for potential Indiana bat habitat. Indiana bats form maternity colonies and roost under the bark of trees in both riparian and upland areas. Therefore, disturbance of trees with exfoliating bark, dead limbs or cavities should be avoided when bat activity may occur. If a bat survey is necessary, please contact this office at (502) 564-7109 or the US Fish and Wildlife Service office at (502) 695-0468 for information on how to proceed.

In areas in which gray bats are known to occur, any cave entrances that exist within the project area (i.e. the right-of-way and regeneration sites) should be surveyed for potential use by gray bats. Because gray bats are cave residents year-round and maternity colonies are generally found in close proximity to rivers, streams and lakes, any caves within the project area could offer potentially valuable habitat to resident gray bats. If a bat survey is necessary, please contact this office at (502) 564-7109 or the US Fish and Wildlife Service office at (502) 695-04681 for information on how to proceed.

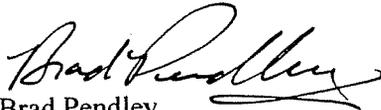


The KDFWR recommends that you contact the appropriate US Corps of Engineers office (Louisville COE (502) 582-5452) and the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water (502) 564-3410 prior to any excavation within the waterways of Kentucky. Additionally, KDFWR recommends the following for the portions of the project that cross intermittent or perennial streams:

1. Development/excavation during a low flow period to minimize disturbance;
2. Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt to the stream;
3. Replanting of disturbed areas after construction, including stream banks and right-of-ways, with native vegetation for soil stabilization and enhancement of fish and wildlife populations;
4. Return all disturbed instream habitat to its original condition upon completion of construction in the area;
5. Preservation of any tree canopy overhanging the stream;
6. Return all right-of-ways to original elevation.

Due to the nature, expanse, and the potential for considerable impact this project may have on critical habitat, we recommend you contact the USFWS at the above number to discuss possible alternative routes for this project. I hope this information proves useful to you. If you have any questions or require additional comment, please call me at the above listed number, extension 366.

Sincerely,



Brad Pendley

Wildlife Biologist II

cc: Environmental Section File

Federal T&E Species Within a 10 Mile Radius of the Project Area				
ScientificName	CommonName	QuadName	CountyName	FederalStatus
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	LE
<i>Myotis grisescens</i>	GRAY MYOTIS	Garfield	BRECKINRIDGE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Hardinsburg	BRECKINRIDGE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	LE
<i>Pleurobema clava</i>	CLUBSHELL	Mauckport	MEADE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	LE
<i>Myotis grisescens</i>	GRAY MYOTIS	Garfield	BRECKINRIDGE	LE
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Hardinsburg	BRECKINRIDGE	LE
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	LE
<i>Pleurobema clava</i>	CLUBSHELL	Mauckport	MEADE	LE

State T&E Species Within a 10 Mile Radius of Project				
ScientificName	CommonName	QuadName	CountyName	KSNPCCStatus
<i>Cistothorus platensis</i>	SEDGE WREN	Glen Dean	BRECKINRIDGE	S
<i>Riparia riparia</i>	BANK SWALLOW	Mattingly	BRECKINRIDGE	S
<i>Ammodramus henslowii</i>	HENSLOW'S SPARROW	Glen Dean	BRECKINRIDGE	S
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Myotis austroriparius</i>	SOUTHEASTERN MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Myotis grisescens</i>	GRAY MYOTIS	Garfield	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Hardinsburg	BRECKINRIDGE	E
<i>Myotis leibii</i>	EASTERN SMALL-FOOTED MYOTIS	Garfield	BRECKINRIDGE	T
<i>Ardea herodias</i>	GREAT BLUE HERON	Glen Dean	BRECKINRIDGE	S
<i>Ardea herodias</i>	GREAT BLUE HERON	Mattingly	BRECKINRIDGE	S
<i>Ardea herodias</i>	GREAT BLUE HERON	Mattingly	BRECKINRIDGE	S
<i>Ardea herodias</i>	GREAT BLUE HERON	Hardinsburg	BRECKINRIDGE	S
<i>Ardea herodias</i>	GREAT BLUE HERON	Mattingly	BRECKINRIDGE	S
<i>Ardea herodias</i>	GREAT BLUE HERON	Hardinsburg	BRECKINRIDGE	S
<i>Ardea herodias</i>	GREAT BLUE HERON	Glen Dean	BRECKINRIDGE	S
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Myotis austroriparius</i>	SOUTHEASTERN MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Cryptobranchus alleganiensis alleganiensis</i>	EASTERN HELLBENDER	Rome	BRECKINRIDGE	S
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Macrochelys temminckii</i>	ALLIGATOR SNAPPING TURTLE	Rome	BRECKINRIDGE	T
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
<i>Ammodramus henslowii</i>	HENSLOW'S SPARROW	Glen Dean	BRECKINRIDGE	S
<i>Myotis grisescens</i>	GRAY MYOTIS	Garfield	BRECKINRIDGE	E
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Cistothorus platensis</i>	SEDGE WREN	Glen Dean	BRECKINRIDGE	S
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Hardinsburg	BRECKINRIDGE	S
<i>Myotis leibii</i>	EASTERN SMALL-FOOTED MYOTIS	Garfield	BRECKINRIDGE	T
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Hardinsburg	BRECKINRIDGE	E
<i>Thyomanes bewickii</i>	BEWICK'S WREN	Garfield	BRECKINRIDGE	S
<i>Vireo bellii</i>	BELL'S VIREO	Guston	MEADE	S
<i>Chondestes grammacus</i>	LARK SPARROW	Big Spring	BRECKINRIDGE	T
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	E

<i>Myotis austroriparius</i>	SOUTHEASTERN MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Myotis grisescens</i>	GRAY MYOTIS	Garfield	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Myotis sodalis</i>	INDIANA BAT	Hardinsburg	BRECKINRIDGE	E
<i>Myotis leibii</i>	EASTERN SMALL-FOOTED MYOTIS	Garfield	BRECKINRIDGE	T
<i>Ichthyomyzon castaneus</i>	CHESTNUT LAMPREY	Garfield	BRECKINRIDGE	S
<i>Ammodramus henslowii</i>	HENSLOW'S SPARROW	Guston	MEADE	S
<i>Circus cyaneus</i>	NORTHERN HARRIER	Guston	MEADE	T
<i>Junco hyemalis</i>	DARK-EYED JUNCO	Guston	MEADE	S
<i>Cistothorus palensis</i>	SEDGE WREN	Big Spring	MEADE	S
<i>Plethobasus cyphus</i>	SHEEPNOSE	Mauckport	MEADE	S
<i>Cryptobranchus alleganiensis alleganiensis</i>	EASTERN HELLBENDER	Mauckport	MEADE	S
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Pleurobema clava</i>	CLUBSHELL	Mauckport	MEADE	E
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Big Spring	BRECKINRIDGE	S
<i>Myotis austroriparius</i>	SOUTHEASTERN MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Hyla versicolor</i>	GRAY TREEFROG	Guston	MEADE	S
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
<i>Myotis sodalis</i>	INDIANA BAT	Garfield	BRECKINRIDGE	E
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
<i>Hyla versicolor</i>	GRAY TREEFROG	Flaherty	MEADE	S
<i>Ammodramus henslowii</i>	HENSLOW'S SPARROW	Guston	MEADE	S
<i>Chondestes grammacus</i>	LARK SPARROW	Big Spring	BRECKINRIDGE	T
<i>Myotis grisescens</i>	GRAY MYOTIS	Garfield	BRECKINRIDGE	E
<i>Aimophila aestivalis</i>	BACHMAN'S SPARROW	New Amsterdam	MEADE	E
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Big Spring	BRECKINRIDGE	S
<i>Ammodramus henslowii</i>	HENSLOW'S SPARROW	Big Spring	MEADE	S
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Big Spring	BRECKINRIDGE	S
<i>Hyla versicolor</i>	GRAY TREEFROG	Big Spring	BRECKINRIDGE	S
<i>Thyomanes bewickii</i>	BEWICK'S WREN	Garfield	BRECKINRIDGE	S
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Hardinsburg	BRECKINRIDGE	S
<i>Amblyopsis spelaea</i>	NORTHERN CAVEFISH	Irvington	BRECKINRIDGE	S
<i>Myotis leibii</i>	EASTERN SMALL-FOOTED MYOTIS	Garfield	BRECKINRIDGE	T
<i>Myotis grisescens</i>	GRAY MYOTIS	Hardinsburg	BRECKINRIDGE	E
<i>Hyla versicolor</i>	GRAY TREEFROG	Big Spring	MEADE	S
<i>Hyla versicolor</i>	GRAY TREEFROG	Garfield	BRECKINRIDGE	S

Amblyopsis spelaea	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
Myotis sodalis	INDIANA BAT	Hardinsburg	BRECKINRIDGE	E
Amblyopsis spelaea	NORTHERN CAVEFISH	Big Spring	MEADE	S
Amblyopsis spelaea	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
Amblyopsis spelaea	NORTHERN CAVEFISH	Garfield	BRECKINRIDGE	S
Myotis sodalis	INDIANA BAT	Garfield	BRECKINRIDGE	E
Pleuroberma clava	CLUBSHELL	Mauckport	MEADE	E

**APPENDIX C**  
**BAT CAVE SURVEY REPORT**

**BAT CAVE SURVEY REPORT  
FOR THE PROPOSED  
SKILLMAN TO MEADE COUNTY  
ELECTRIC TRANSMISSION TIE LINE**

*Prepared for:* **Big Rivers Electric Corporation  
Henderson, Kentucky**

**April 2004**

## **BACKGROUND & METHODS**

GILPIN GROUP – Environmental Consulting and Planning was contracted by Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to perform a bat cave survey along the proposed route for the planned new Skillman to Meade County 161 kilovolt (kV) Electric Transmission Tie Line. The purpose of the survey was to determine whether there are any caves in the project impact area that are being used as roosting habitat or hibernacula by either the federally endangered Indiana bat (*Myotis sodalis*) or gray bat (*Myotis grisescens*). The proposed route for the new electric transmission tie line extends in a general northeasterly direction from an existing transmission line located approximately three miles west of the incorporated community of Hardinsburg in central Breckinridge County, Kentucky, to an existing electric substation located in eastern Meade County, Kentucky, near the western corner of the intersection of State Routes 428 and 448 (79), northeast of the incorporated community of Irvington (See PROJECT MAPS 1 - 5, Appendix A). The proposed route for the planned new electric transmission tie line is approximately 17 miles in length and the proposed right-of-way (ROW) width for the new line is 125 feet.

The field survey was conducted March 27 and 28, 2004, and encompassed a thorough investigation of the entire length and width of the proposed ROW for the planned new electric line. The investigation was performed while the trees in the project area were in bud, prior to leaf development, and it included a visual investigation from the approximate edge of the proposed ROW for caves off both sides of the ROW. Any sinkholes located within a few hundred feet of the proposed ROW, as depicted on the USGS topographic maps, were also visually inspected for caves.

One of two known cave locations provided by the U.S. Fish and Wildlife, east of Webster-Clifton Mills Road and southwest of the unincorporated community of Webster, was investigated as a possible hibernaculum for the Indiana or gray bat. The other known cave location provided by the FWS was south of State Route 2687 and east of the intersection of State Routes 267 and 1385. This cave could only be accessed by crossing an area posted with *No Trespassing Without Written Permission of Owner*, and as a result, this cave was not investigated.

### **FINDINGS**

The investigation described above did not uncover any unknown caves in the project impact area. The one known cave in the project area that was investigated showed no evidence of being used as a hibernaculum, but could potentially be used as a summer roost. This cave is located more than 1,000 feet distant from the proposed transmission line route and is located on the opposite side of Webster-Clifton Mills Road from the proposed route. The area in the vicinity of the cave opening also exhibited evidence of artifact hunting (potting) which consisted of disturbed ground, digging utensils and lights mounted on poles. The other known cave in the area (the one that was not investigated) is located between 3,000 and 4,000 feet distant from the proposed transmission line route and on the opposite side of State Route 267 from the proposed route.

### **CONCLUSION**

No unknown caves were discovered in the project impact area that would be used as potential roosting habitat or hibernacula for either the Indiana or gray bat. The two caves known to exist in the vicinity of the impact area would not be adversely affected by the proposed project due to the distance the caves are located from the proposed transmission line route and the

presence of existing roads between the proposed route and the caves. Big Rivers is also committed to performing ROW clearing activities on the proposed ROW between October 15 and March 31 to avoid effects on Indiana bats potentially nesting in the project impact area. Therefore, due to the results of the survey and the mitigation measures outlined above, Big Rivers' proposed Skillman to Meade County Electric Transmission Tie Line should not have any adverse impacts on either the Indiana or gray bats.

### **QUALIFICATIONS OF INVESTIGATORS**

Mr. Gary W. Gilpin, Environmental Scientist/Owner, GILPIN GROUP – Environmental Consulting & Planning, Wellsville, New York, and Mr. Joe Settles, Biologist, Richmond, Kentucky performed the above-described survey.

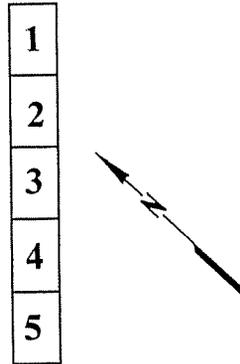
Mr. Gilpin possesses a Bachelor of Science Degree in biology from the New York State University College at Brockport, New York and Master of Science Degrees in environmental resource planning/environmental impact analysis, and environmental land use planning from the New York State University College of Environmental Science and Forestry, and Syracuse University, Syracuse, New York. Mr. Gilpin has been employed as an environmental professional since 1978, and has been the owner and principal scientist of an environmental consulting firm for the past 21 years with clients located throughout the eastern and mid United States.

Mr. Settles is possesses a Bachelor's degree in Wildlife Management, as well as a Bachelor's degree in Agriculture from Eastern Kentucky University. He obtained his Masters degree in Plant and Soil Science from the University of Kentucky. Mr. Settles has worked extensively with Indiana bats and endangered species since graduating in 1996 from Eastern Kentucky University.

# APPENDIX A

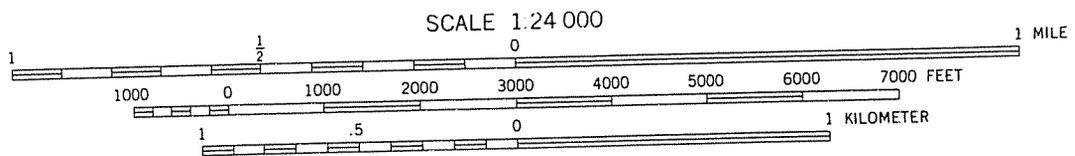
## PROJECT REFERENCE MAPS

### KEY TO MAPS

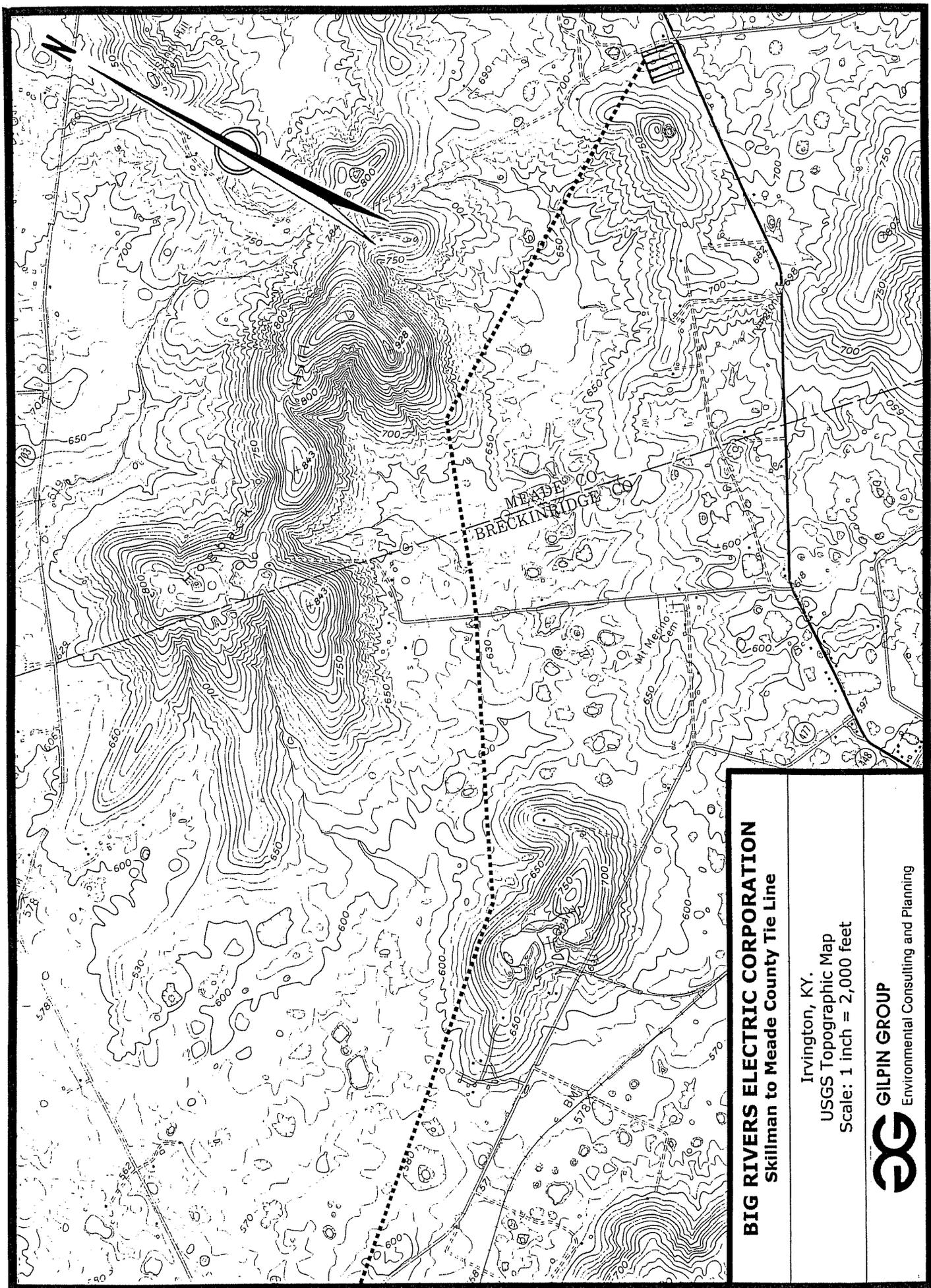


### MAP LEGEND

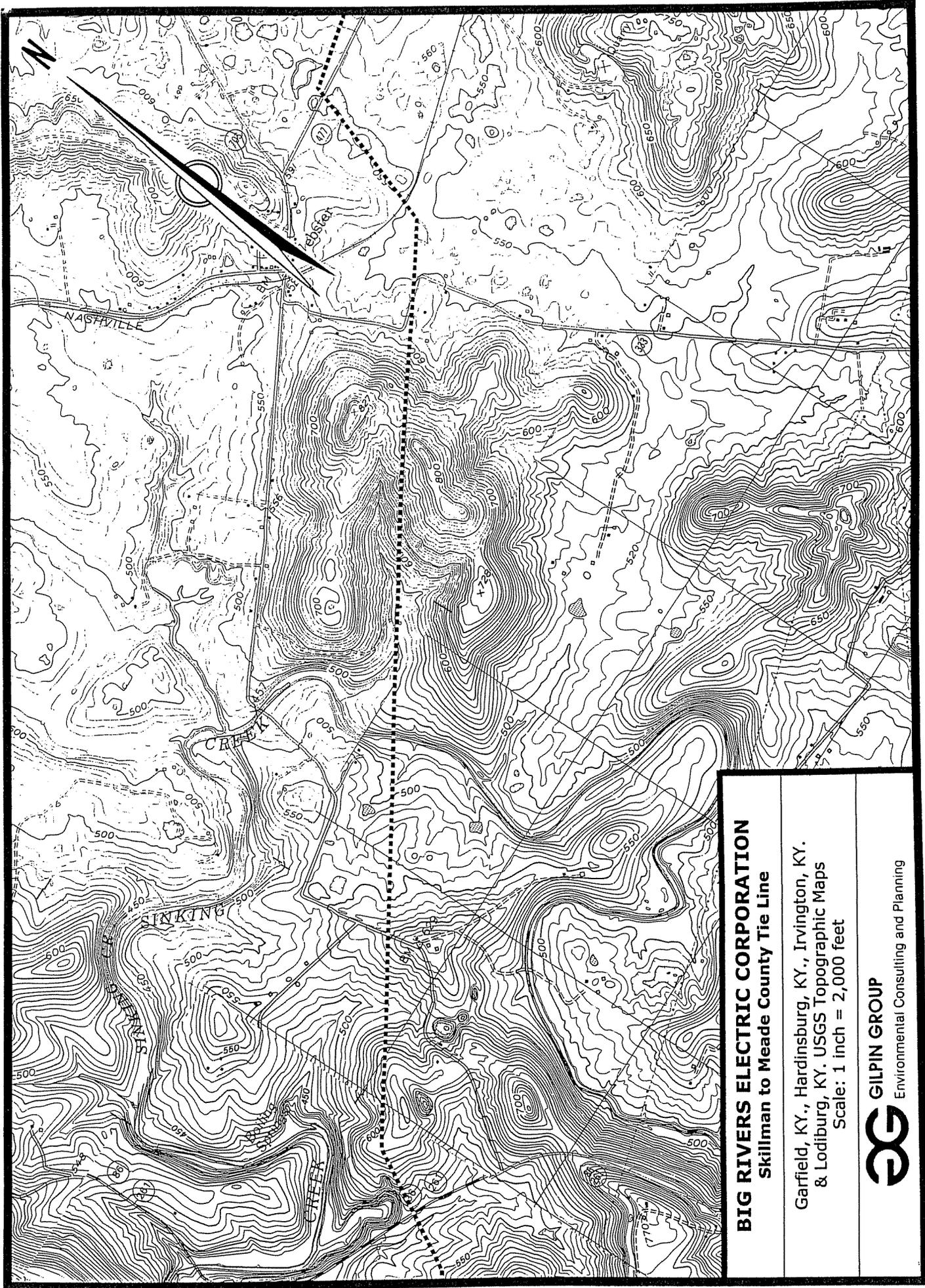
- ..... - Proposed Transmission Line Route
- - - - - Existing Transmission Line
-  Existing Electric Substation

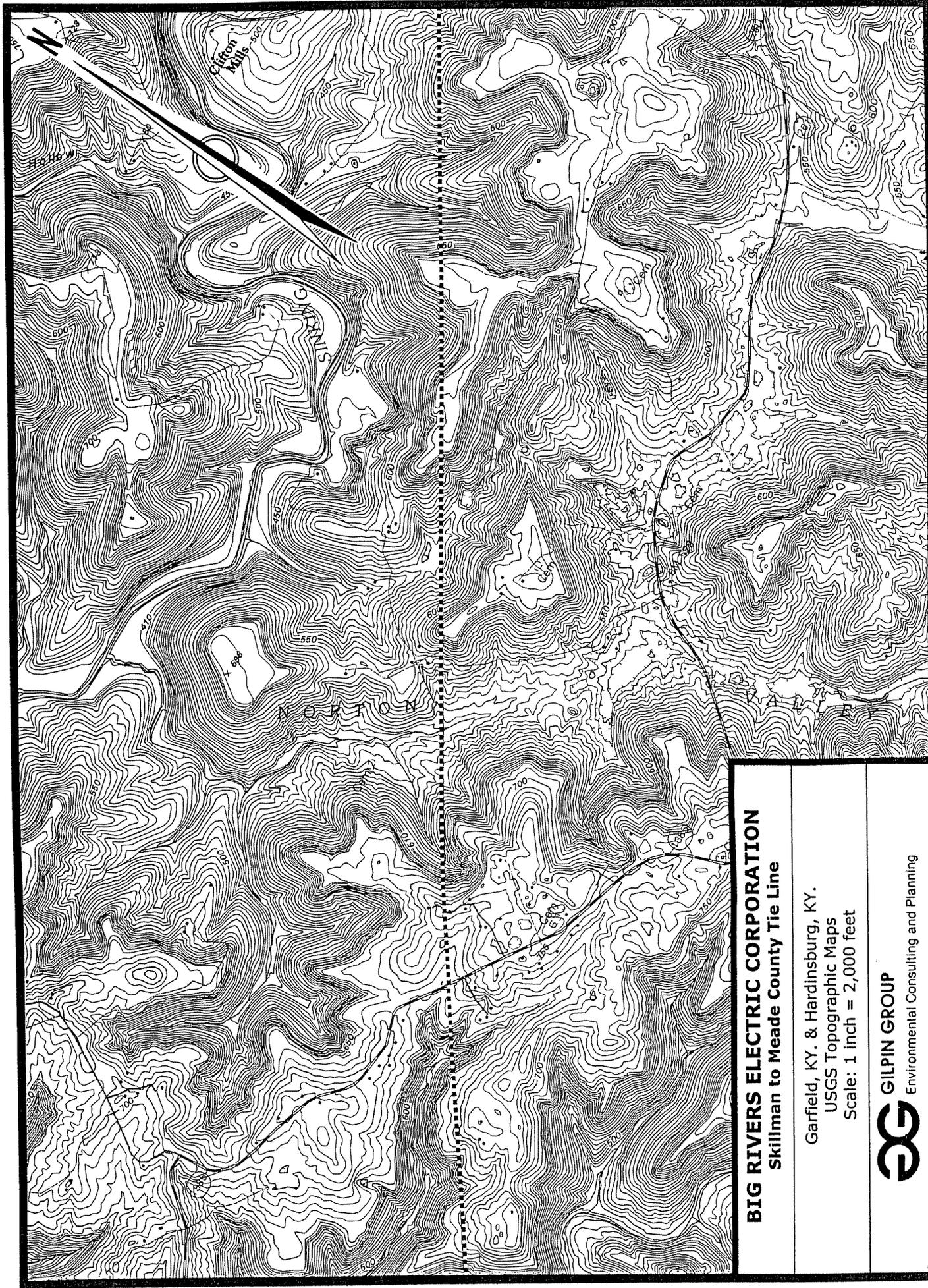


**NOTE:** The proposed and existing electric facilities depicted on the maps contained in this appendix are not drawn to exact scale and are intended for location purposes only.



<b>BIG RIVERS ELECTRIC CORPORATION</b> Skillman to Meade County Tie Line
Irvington, KY. USGS Topographic Map Scale: 1 inch = 2,000 feet
 <b>GILPIN GROUP</b> Environmental Consulting and Planning

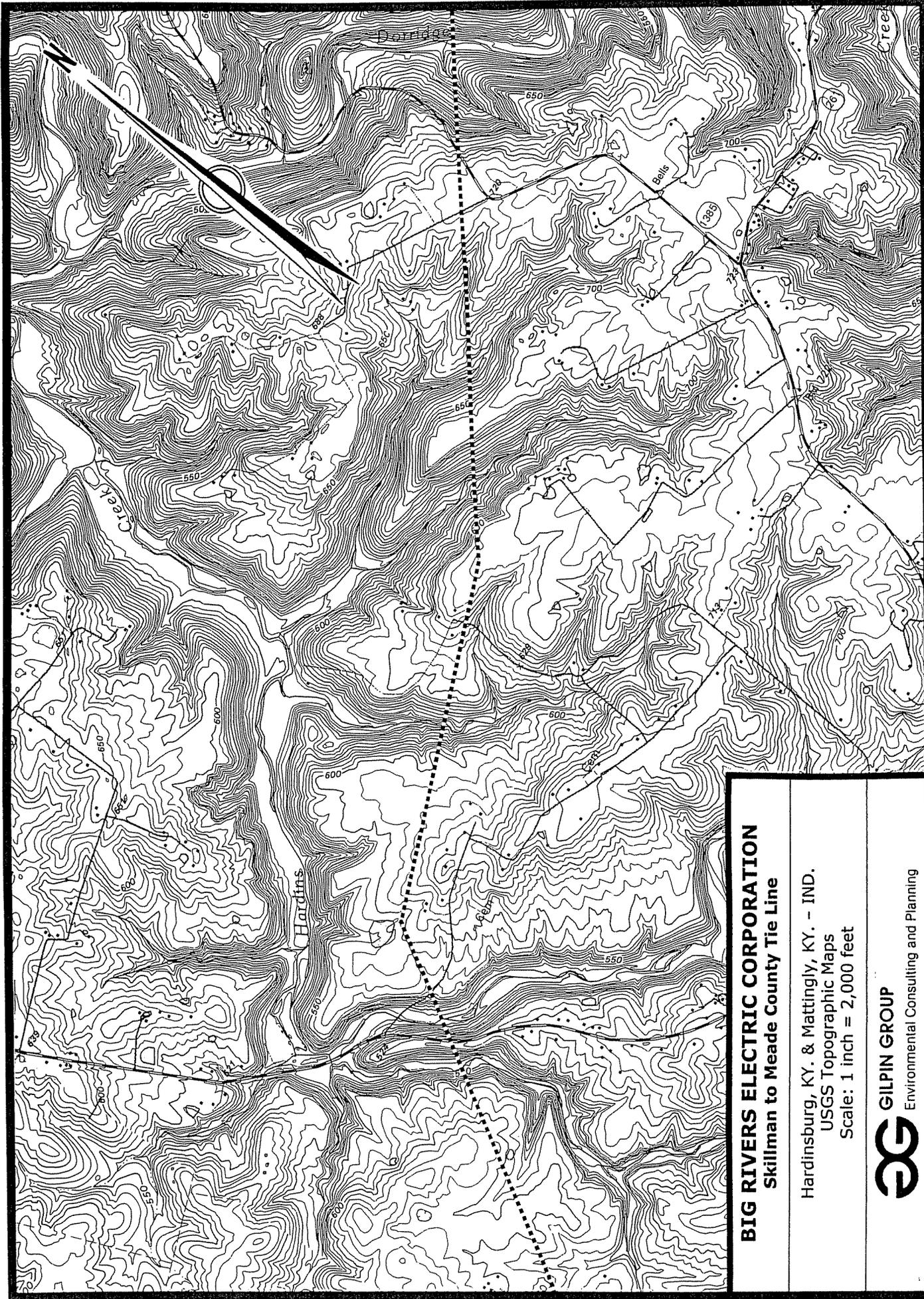




**BIG RIVERS ELECTRIC CORPORATION**  
**Skillman to Meade County Tie Line**

Garfield, KY. & Hardinsburg, KY.  
USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

**GILPIN GROUP**  
Environmental Consulting and Planning

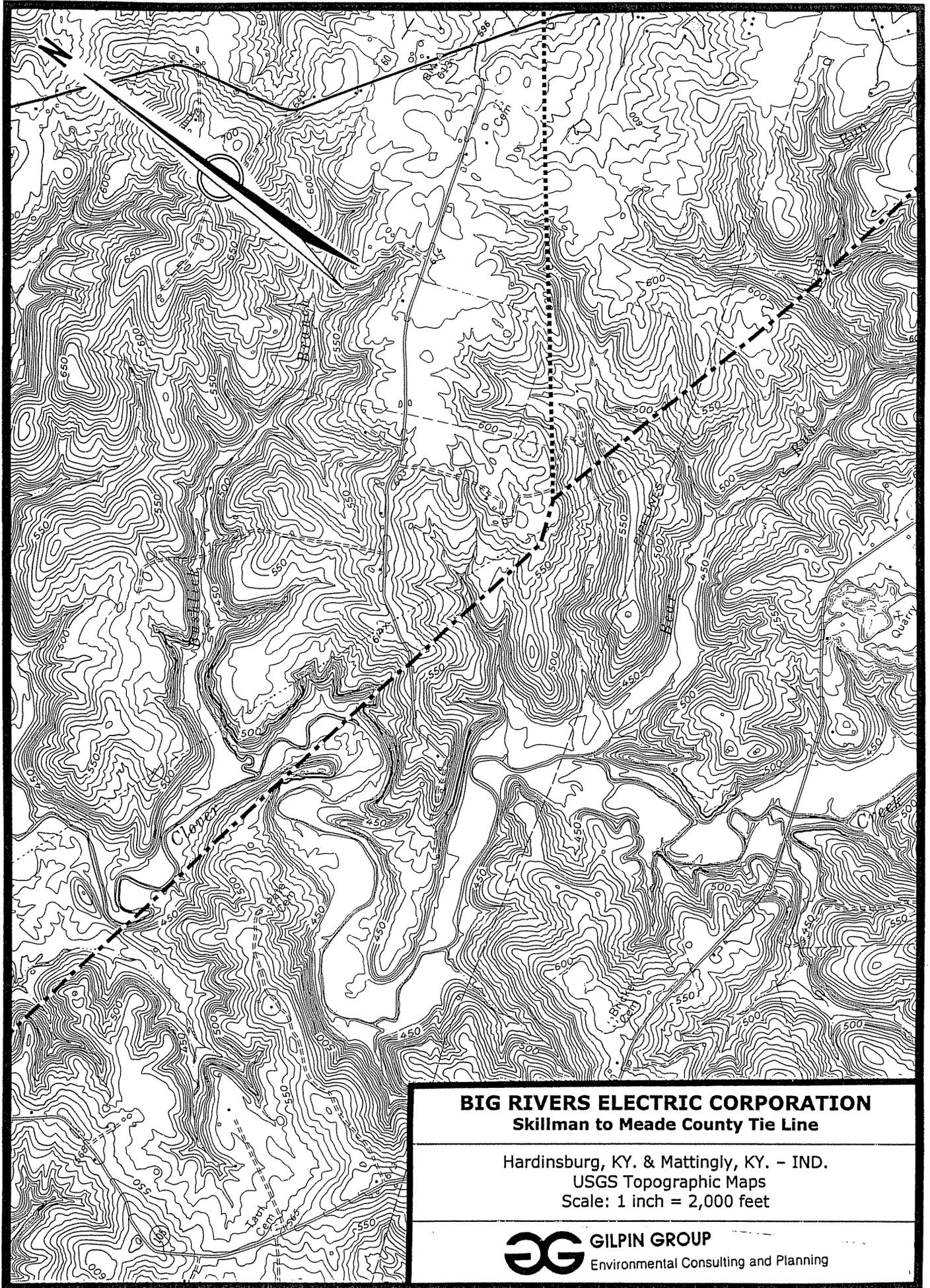


**BIG RIVERS ELECTRIC CORPORATION**  
**Skillman to Meade County Tie Line**

Hardinsburg, KY. & Mattingly, KY. - IND.  
USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

**GILPIN GROUP**  
Environmental Consulting and Planning





**BIG RIVERS ELECTRIC CORPORATION**  
**Skillman to Meade County Tie Line**

Hardinsburg, KY. & Mattingly, KY. - IND.  
USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

 **GILPIN GROUP**  
Environmental Consulting and Planning



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

3761 GEORGETOWN ROAD

FRANKFORT, KY 40601

May 10, 2004

Mr. Gary Gilpin  
Gilpin Group  
2087 Ketchner Road  
Wellsville, New York 14895

Subject: FWS #04-0961; Bat Cave Survey Report for Big Rivers Electric Corporation,  
Meade and Breckinridge Counties, Kentucky

Dear Mr. Gilpin:

Thank you for your letter and enclosures of April 6, 2004, regarding the bat cave survey report for the proposed Skillman to Meade County Electric Transmission Tie Line for the Big Rivers Electric Corporation (FWS #04-0439). Fish and Wildlife Service (Service) biologists have reviewed the document and we offer the following comments.

According to the report, no unknown caves were discovered within the project impact area that would be used as potential roosting habitat or hibernacula for either the Indiana bat or gray bat. Further, Big Rivers is also committed to performing right-of-way (ROW) clearing activities on the ROW between October 15 and March 31 to avoid effects on Indiana bats potentially roosting in the project impact area. Based on the results of the survey and the fact that tree clearing will be limited to the time period between October 15 and March 31, we concur that the proposed project is not likely to adversely affect the Indiana bat and gray bat

We appreciate the opportunity to comment on this survey report, and look forward to reviewing the survey report for Eggert's sunflower in the near future. If you have any questions or if we can be of further assistance, please contact Mindi Brady at (502)/695-0468 (ext.229).

Sincerely,

A handwritten signature in black ink that reads "Virgil Lee Andrews, Jr." The signature is written in a cursive style.

Virgil Lee Andrews, Jr.  
Field Supervisor

October 14, 2004

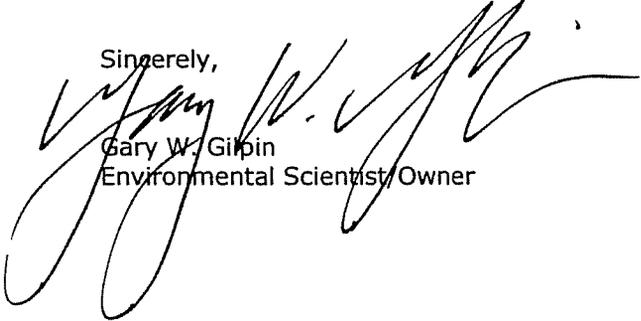
2087 Ketchner Road  
Wellsville, New York 14895  
Phone: (585) 593-5696  
E-mail: Gilpin@eznet.net

Robert Quigel  
Environmental Protection Specialist/RUS  
80 Robinson Landing Road  
Severna Park, Maryland 21146

Dear Bob:

Enclosed is a copy of Big Rivers Electric Corporation's (Big Rivers') "Eggert's Sunflower (*Helianthus Eggertii*) Survey Report for the Proposed Skillman to Meade County Electric Tie Line" (ER) that was submitted to the U.S. Fish and Wildlife Service (FWS) for review (See enclosed letter to Mr. Virgil Lee A. Andrews, Jr., FWS). The survey found no populations or individuals of Eggert's sunflower within the proposed transmission line right-of-way and the FWS concurred with the findings of the report that the proposed project is *not likely to adversely affect* the sunflower (See enclosed e-mail from Ms. Mindi Brady, FWS). The survey report along with the FWS concurrence should bring to a conclusion the environmental investigation for Big Rivers' proposed Skillman to Meade County Electric Tie Line. Please give me a call should you have any questions regarding the survey report, or should you require further information.

Sincerely,

  
Gary W. Gilpin  
Environmental Scientist/Owner

cc: Dale Rector, Big Rivers  
Enclosure

1983-2004

21

YEARS OF SERVICE

Gary,

We have reviewed the Eggert's sunflower survey report submitted on September 13, 2004, for Big Rivers Electric Corporation's proposed Skillman to Meade County Electric Transmission Line project.

According to your report, numerous areas of favorable habitat exist along the proposed transmission line route, however, no Eggert's sunflowers were discovered as a result of the surveys performed. We agree that the proposed project is not likely to adversely affect Eggert's sunflower. Based on our knowledge of the project and the information submitted, the requirements of section 7 of the Endangered Species Act have been fulfilled for this project. Big Rivers Electric Corporation's obligations under section 7 must be reconsidered, however, if: (1) new information reveals that the proposed action may affect listed species in a manner or to an extent not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

If you have any questions, please call or email.

Thanks,

Mindi Brady  
Fish & Wildlife Biologist

US Fish & Wildlife Service  
Kentucky Field Office  
3761 Georgetown Rd.  
Frankfort, KY 40601  
502/695-0468 extn. 229  
502/695-1024 fax  
Mindi\_Brady@fws.gov  
<http://frankfort.fws.gov>

10/13/2004

**EGGERT'S SUNFLOWER (*HELIANTHUS EGGERTII*)**

**SURVEY REPORT FOR THE PROPOSED  
SKILLMAN TO MEADE COUNTY  
ELECTRIC TRANSMISSION TIE LINE**

*Prepared for:* **Big Rivers Electric Corporation  
Henderson, Kentucky**

**September 2004**

## **BACKGROUND & METHODS**

GILPIN GROUP – Environmental Consulting and Planning was contracted by Big Rivers Electric Corporation (Big Rivers) of Henderson, Kentucky to perform a survey along the proposed route for the planned new Skillman to Meade County 161 kilovolt (kV) Electric Transmission Tie Line for the federally threatened Eggert's sunflower (*Helianthus eggertii*). The purpose of the survey was to determine whether Eggert's sunflower is present within the proposed right-of-way for the transmission line or within the immediate vicinity of the proposed route. The proposed route for the new electric transmission tie line extends in a general northeasterly direction from an existing transmission line located approximately three miles west of the incorporated community of Hardinsburg in central Breckinridge County, Kentucky, to an existing electric substation located in eastern Meade County, Kentucky, near the western corner of the intersection of State Routes 428 and 448 (79), northeast of the incorporated community of Irvington (See PROJECT MAPS 1 - 5, Appendix A). The proposed route for the planned new electric transmission tie line is approximately 17 miles in length and the proposed right-of-way (ROW) width for the new line is 125 feet.

The field survey was conducted September 3 & 4, 2004, during the flowering period of the threatened sunflower to enable easy recognition of the plant should it be present. The entire length and width of the proposed ROW for the planned new electric line was thoroughly investigated for habitat favorable to Eggert's sunflower and areas containing favorable habitat were surveyed for the presence of this threatened plant.

## **FINDINGS & CONCLUSION**

The investigation described above uncovered numerous areas of favorable habitat along the proposed transmission line route and no populations (or individuals) of Eggert's sunflower

were discovered as a result of the surveys performed on these habitat areas. Therefore, due to the results of the investigation and surveys performed along the proposed transmission line route, Big Rivers' proposed Skillman to Meade County Electric Transmission Tie Line should not have any impacts on Eggert's sunflower.

**QUALIFICATIONS OF INVESTIGATORS**

Mr. Gary W. Gilpin, Environmental Scientist/Owner, GILPIN GROUP -- Environmental Consulting & Planning, Wellsville, New York, and Mr. Joe Settles, Biologist, Richmond, Kentucky performed the above-described survey.

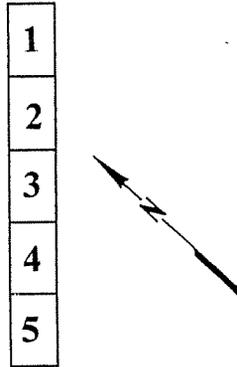
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# APPENDIX A

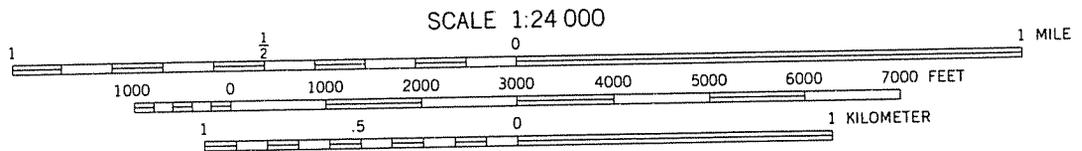
## PROJECT REFERENCE MAPS

### KEY TO MAPS

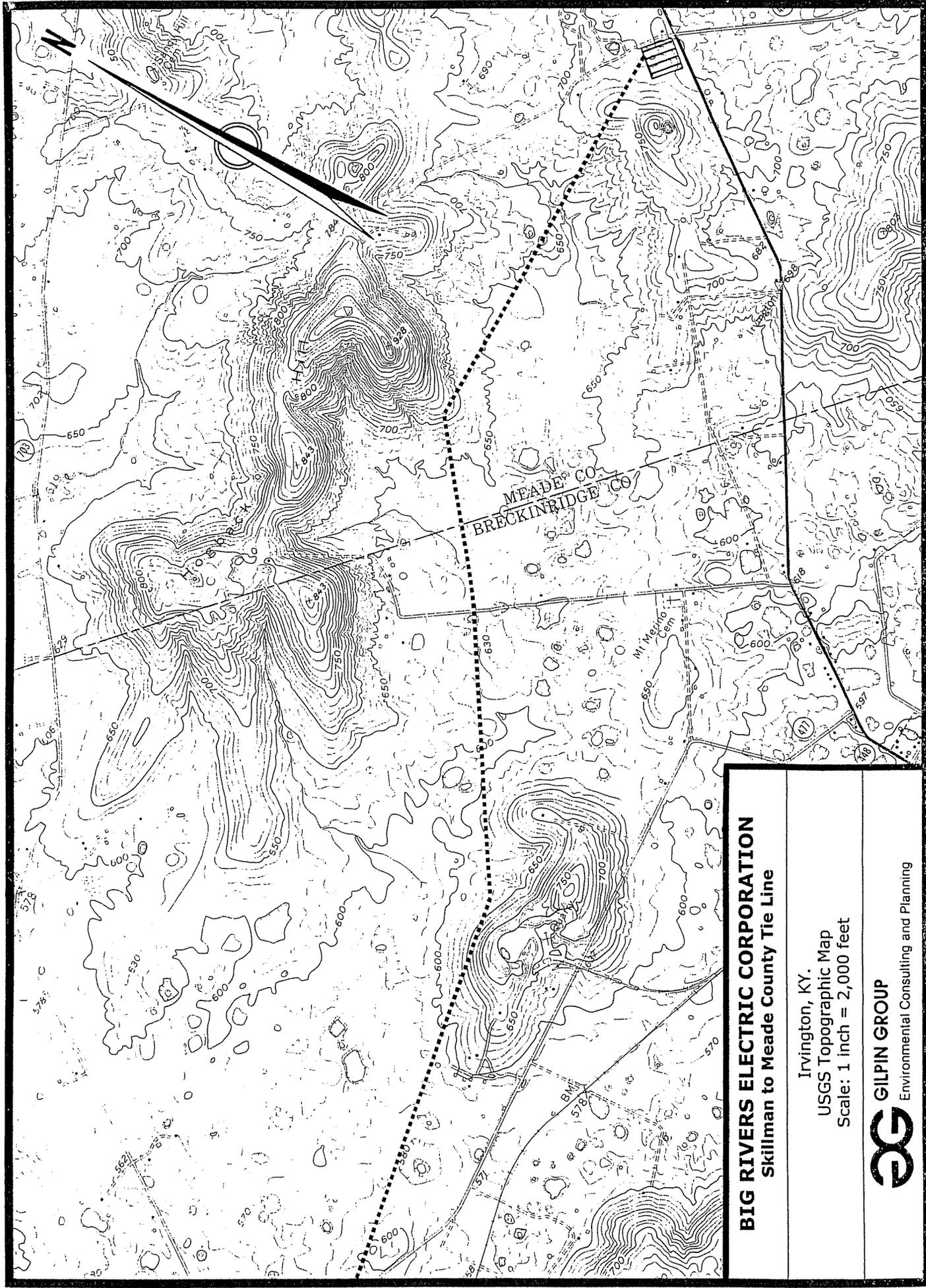


### MAP LEGEND

- ..... - Proposed Transmission Line Route
- - - - - Existing Transmission Line
-  Existing Electric Substation



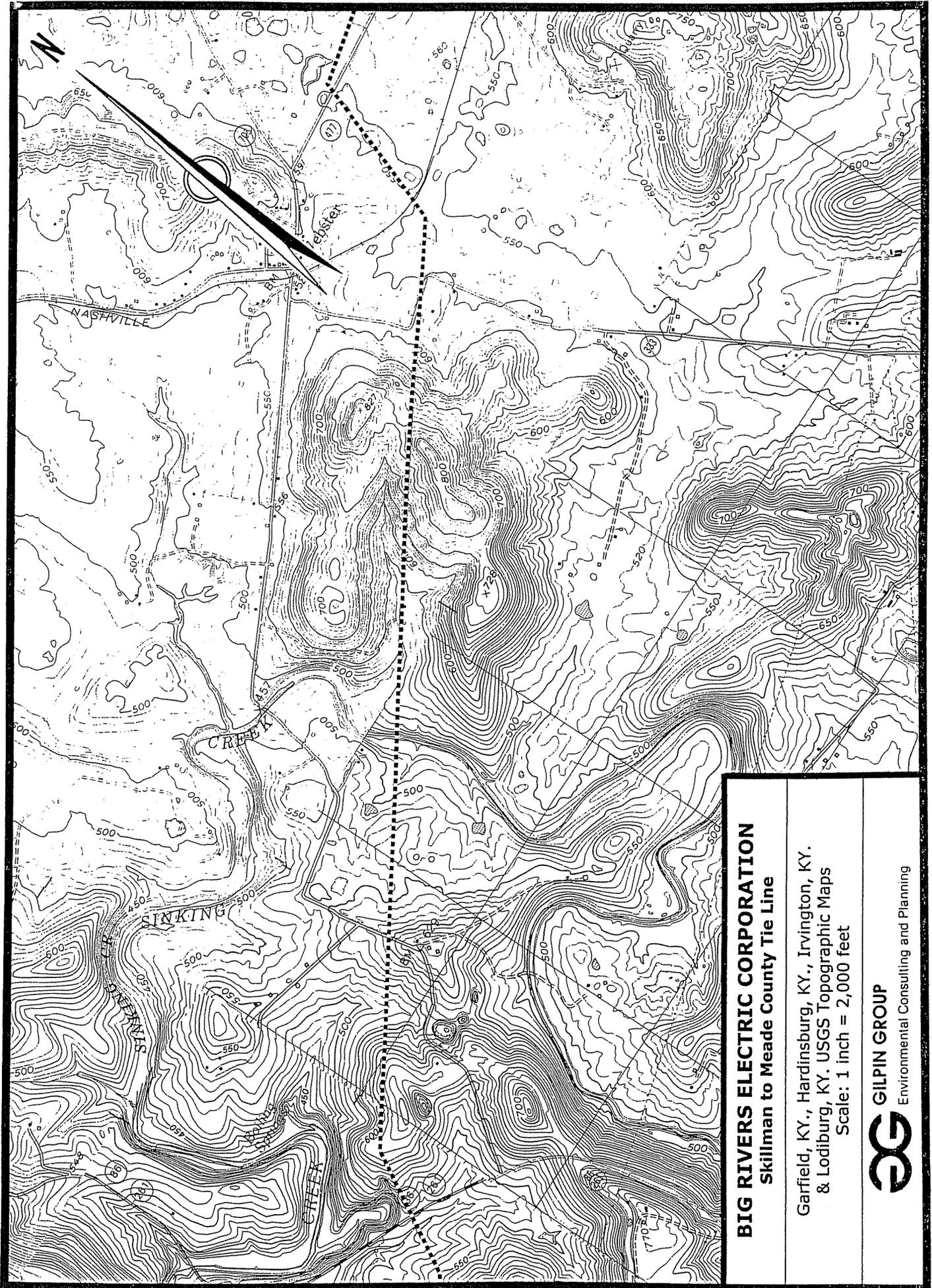
**NOTE:** The proposed and existing electric facilities depicted on the maps contained in this appendix are not drawn to exact scale and are intended for location purposes only.



**BIG RIVERS ELECTRIC CORPORATION**  
**Skillman to Meade County Tie Line**

Irvington, KY.  
USGS Topographic Map  
Scale: 1 inch = 2,000 feet

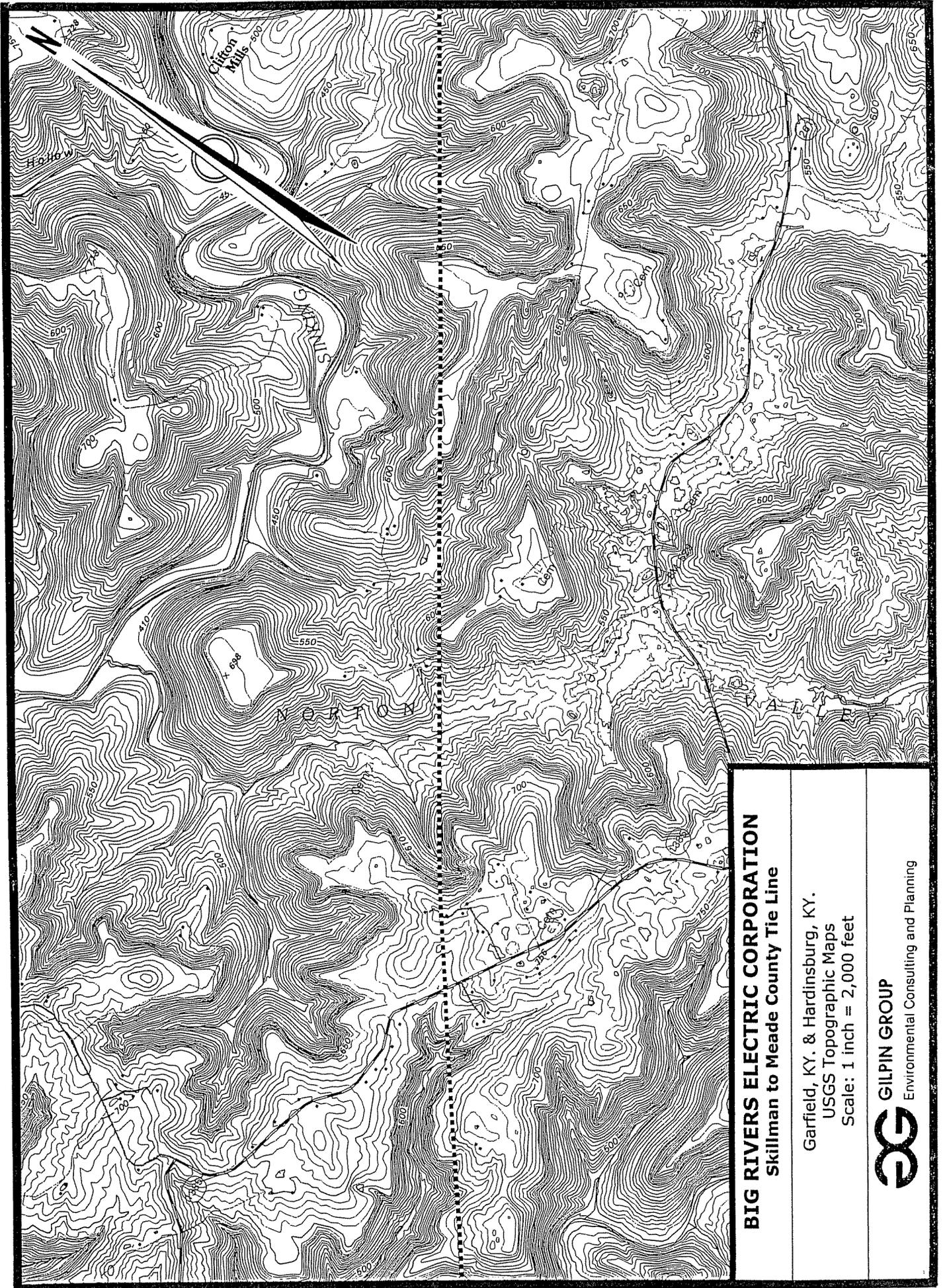




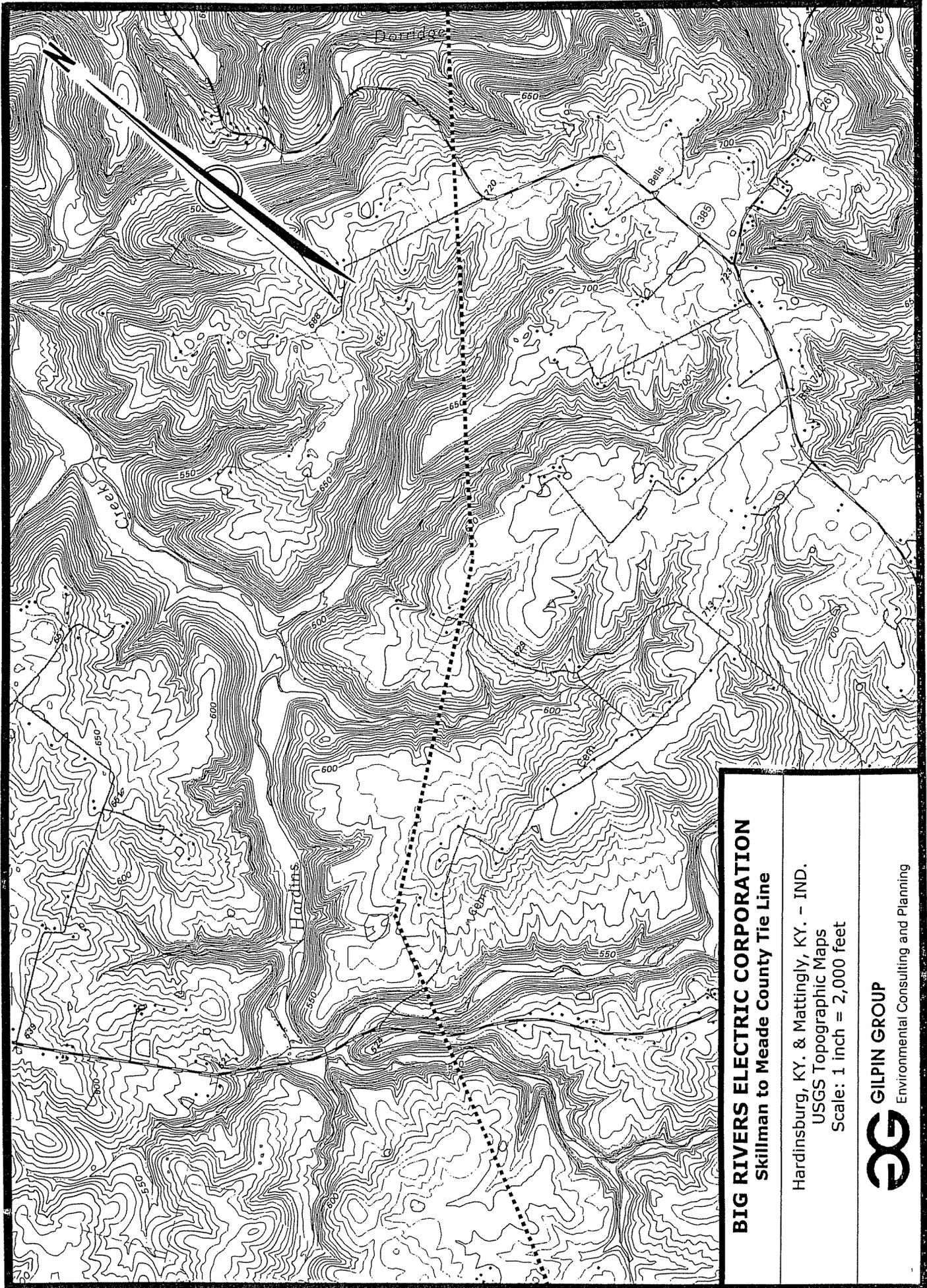
**BIG RIVERS ELECTRIC CORPORATION**  
Skillman to Meade County Tie Line

Garfield, KY., Hardinsburg, KY., Irvington, KY.  
& Lodiuburg, KY. USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

**GILPIN GROUP**  
Environmental Consulting and Planning



<p><b>BIG RIVERS ELECTRIC CORPORATION</b> Skillman to Meade County Tie Line</p>	<p>Garfield, KY. &amp; Hardinsburg, KY. USGS Topographic Maps Scale: 1 inch = 2,000 feet</p>	<p><b>GILPIN GROUP</b> Environmental Consulting and Planning</p> 
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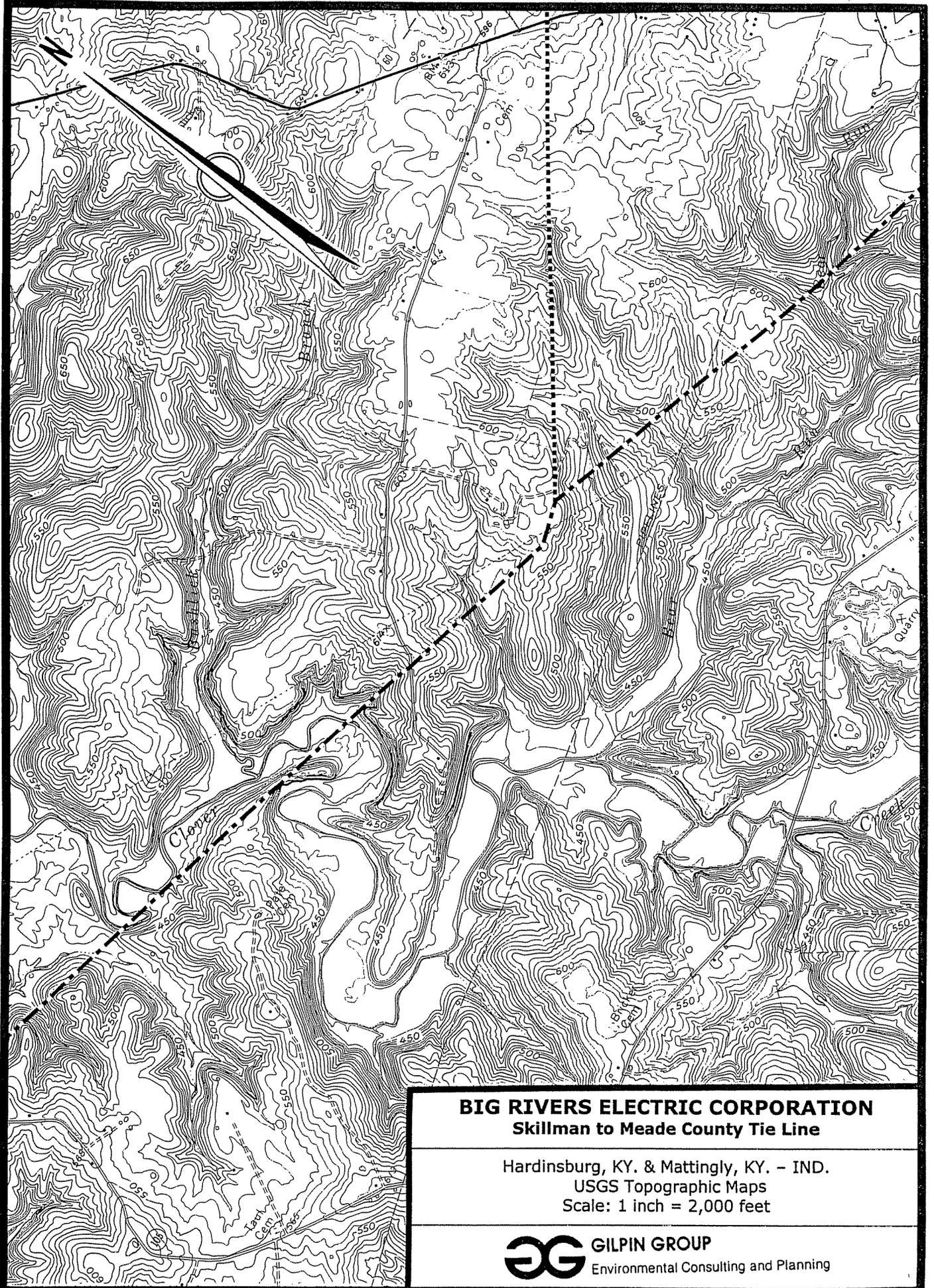


**BIG RIVERS ELECTRIC CORPORATION**  
**Skillman to Meade County Tie Line**

Hardinsburg, KY. & Mattingly, KY. - IND.  
USGS Topographic Maps  
Scale: 1 inch = 2,000 feet

**GILPIN GROUP**  
Environmental Consulting and Planning





**EXHIBIT C**

**Notices published in the *Meade County Messenger* and the *Breckinridge County Herald***

***News*, and affidavits of publication from each newspaper**

# the Meade County Messenger

235 Main Street • P.O. Box 678 • Brandenburg, Ky 40108  
270-422-2155 • 270-877-2625 • FAX 270-422-2110

----- AFFIDAVIT -----

Advertiser Big Rivers Corporation Product notice of proposed electric transmission line construction project.  
Advertising Date 10-13-04 Reader \_\_\_\_\_ Cost \$152.10  
Advertising Date \_\_\_\_\_ Inches \_\_\_\_\_ Cost \_\_\_\_\_  
Advertising Date \_\_\_\_\_ Inches \_\_\_\_\_ Cost \_\_\_\_\_

Carissa Faushee

State of Kentucky

County of Meade

I, a Notary Public for the State at Large, do hereby certify that the foregoing Affidavit was this the 15 day of October, produced before me in the State and County aforesaid, and was signed, acknowledged, delivered, and sworn to by Carissa Faushee of the Meade County Messenger to be his/her free act and deed.

Linda Riddell  
Notary Public State At Large

September 17, 2007  
My Commission Expires

**NOTICES**

**NOTICES**

**NOTICES**

**NOTICES**

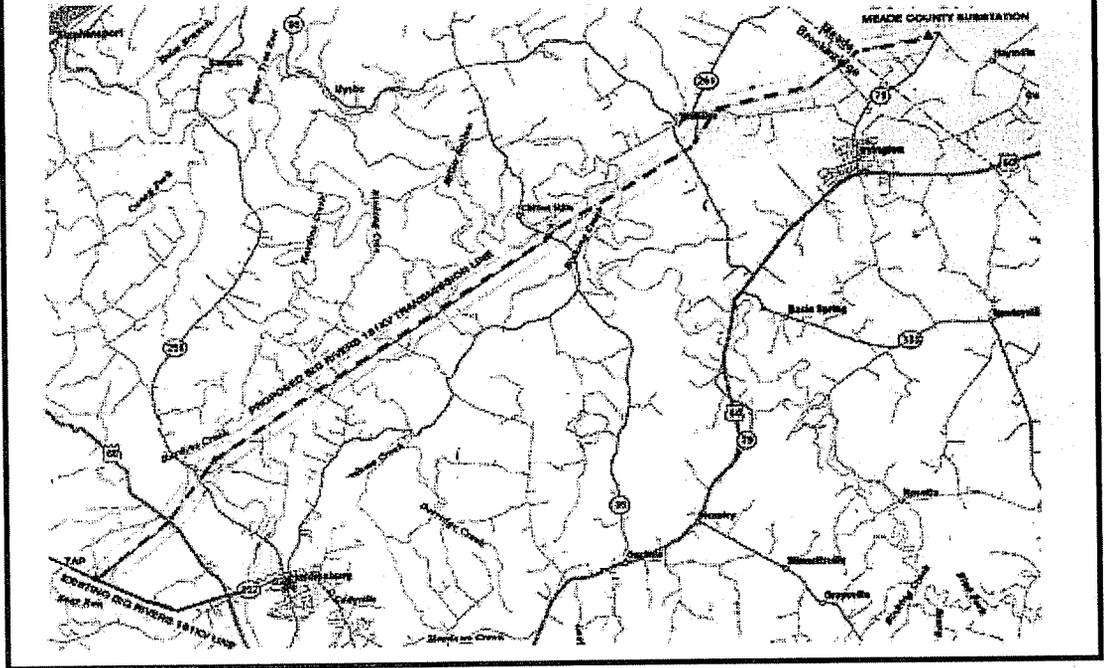
**NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE  
CONSTRUCTION PROJECT**

Big Rivers Electric Corporation of Henderson, Kentucky ("Big Rivers") proposes to construct a 161,000 volt transmission line in Breckinridge and Meade counties, Kentucky. The purpose of the proposed transmission line is to increase the reliability of the wholesale electric supply to seven electric distribution substations from which Meade County Rural Electric Cooperative Corporation provides retail electric service to customers in Meade and Breckinridge counties.

The route for the proposed line begins at an existing line located approximately 3 miles west of Hardinsburg in central Breckinridge County and extends 17.3 miles in a general northeasterly direction to end at an existing Big Rivers substation located northeast of Irvington in southwestern Meade County. A map showing the route of the proposed line is shown below.

Big Rivers plans to file an application with the Kentucky Public Service Commission ("Commission") on or about October 21, 2004, seeking a certificate of public convenience and necessity authorizing this project. The purpose of the Commission's review of Big Rivers' application is to determine whether the proposed transmission line is required by the public convenience and necessity. Any interested person, including a person over whose property the proposed transmission line will cross, may request intervention in those proceedings, and may request that the Commission conduct a public hearing in either Breckinridge or Meade County.

To intervene in the Commission's proceeding on Big Rivers' application for a certificate of public convenience and necessity, or to request a public hearing in that case, contact the Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602, telephone number (502) 564-3940. The docket number under which this application will be processed is 2004-00365.



# The Breckinridge County Herald News

120 Old Hwy 60 East  
P.O. Box 6  
Hardinsburg, KY 40143  
Phone: (270) 756-2109  
Fax: (270) 756-1003

October 19, 2004

## AFFIDAVIT OF PUBLICATION

I, Linda Thompson, hereby certify that I am the Classified Advertising Manager of The Breckinridge County Herald News, a newspaper printed and published in the State of Kentucky, County of Breckinridge, and having a bona fide circulation in Breckinridge County, City of Hardinsburg.

I certify that the attached is a true copy of the advertisement inserted into The Breckinridge County Herald News on Wednesday, October 13, 2004.

The Breckinridge County Herald News

By:  \_\_\_\_\_

Subscribed and sworn to before me this October 20th, 2004.

My Commission expires: 2/14/07.

 \_\_\_\_\_  
Notary Public  
Breckinridge County, Kentucky

**NOTICE OF PROPOSED ELECTRIC  
TRANSMISSION LINE  
CONSTRUCTION PROJECT**

Big Rivers Electric Corporation of Henderson, Kentucky ("Big Rivers") proposes to construct a 161,000 volt transmission line in Breckinridge and Meade Counties, Kentucky. The purpose of the proposed transmission line is to increase the reliability of the wholesale electric supply to seven electric distribution substations from which Meade County Rural Electric Cooperative Corporation provides retail electric service to customers in Meade and Breckinridge Counties.

The route for the proposed line begins at an existing line located approximately 3 miles west of Hardinsburg in central Breckinridge County and extends 17.3 miles in a general northeasterly direction to end at an existing Big Rivers substation located northeast of Irvington in southwestern Meade County. A map showing the route of the proposed line is shown below.

Big Rivers plans to file an application with the Kentucky Public Service Commission ("Commission") on or about October 21, 2004, seeking a certificate of public convenience and necessity authorizing this project. The purpose of the Commission's review of Big Rivers' application is to determine whether the proposed transmission line is required by the public convenience and necessity. Any interested person, including a person over whose property the proposed transmission line will cross, may request intervention in those proceedings, and may request that the Commission conduct a public hearing in either Breckinridge or Meade County.

To intervene in the Commission's proceeding on Big Rivers' application for a certificate of public convenience and necessity, or to request a public hearing in that case, contact the Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602; telephone number (502) 564-3940. The docket number under which this application will be processed is 2004-00365.

